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## INSIDE DOPE

by GEORGE F. TAUBENECK

**Howard Blood  
Delivers a Classic  
Partial Loss of Freedom  
& Self-Government  
Taft-Hartley Cuts Some  
Of Nation's Bonds  
Government Gets One Third  
Of Your Income  
Younger Generation Must  
Not Be Bled White  
Industrial Research Is  
Birthright of Business  
Individual Incentive  
Curbed by Taxation  
Specialize In Things  
You Do Best**

### Howard Blood Delivers a Classic

This week "Inside Dope" abdicates in favor of a masterly summation of the American System and what it means, written by President Howard Blood of Norge. Originally prepared as an address to the Senior Class of the Sibley School of Engineering, Ithaca, N. Y., it is published in this column for the first time.

We say "first time" because we hope and believe it will be reprinted countless times, and passed out to school graduates all over the land for many years to come. Following is Mr. Blood's message:

"Although I believe there is in this country a wide-spread failure to fully appreciate our good fortune as compared with the rest of the world and to understand and appraise the reasons why this is the land of opportunity, I think I may fairly assume on your part an eager anticipation of the game you are about to play; and on the part of those whose education was delayed by their military service, a feeling that it is about time you began to enjoy some of the fruits of Victory.

"Under these circumstances I recommend to your attention the fact that the generations immediately preceding you have carelessly lost some of the heritage they received from generations preceding them; and that with full comprehension of the factors involved and the forces at work, it is of primary concern to you to vigorously enter the fight for the restoration of certain freedoms which have been tossed away, and to stop our country from getting caught in a world-wide trend to the further limitation of freedom and the consequent limitation of individual opportunity.

### Partial Loss of Freedom & Self-Government

"Unfortunately our rapid gain in scientific knowledge, in technical skills and in the arts of distribution, have in recent years been accompanied by partial loss of the art of democratic self-government and individual freedom.

"When you find yourselves working in an atmosphere of too much taxes and many, many limitations to your freedom, I hope you will not take these conditions for granted and assume that things have always been that way, nor indeed that they need always stay that way.

"Until comparatively recently, there was almost complete freedom in this country for the right to work. Only certain trades were so organized as to restrict free admission along the lines of the trade guilds that stifled progress in the middle ages. For the most part Americans could work where they pleased and when they pleased without pay-

(Continued on Page 14, Column 1)

## 'Pushbutton' Range Is New Addition To Hotpoint Line

CHICAGO — A new, automatic "pushbutton" electric range said to incorporate 40 departures from earlier models in design and operation is being produced by Hotpoint, Inc. for shipment to dealers starting in July, Leonard C. Truesdell, vice president of marketing, announced.

The range, Model RC-11, is equipped with transparent pushbuttons which glow red, yellow, violet, green, and blue to identify individual heat settings for the four surface units and the oven. The "talking colors," Truesdell said, replace the word guides, "high," "second," "third," "low," and "warm."

"The novel use of colors to identify heat positions was adapted to the range because similar identification has been widely used in such familiar devices as stop and go signs and railroad signals," it was explained.

Other new developments incorporated in the range are rounded oven-interior corners with the heating unit sealed in the walls, automatic reset oven timer, four surface units with one adjustable for deep-well cooking, and a warmer unit with pushbutton switch, Truesdell told a group representing the company's 100 wholesale distributors.

The official described the RC-11 as the "greatest advance in Hotpoint's electric range design in 25 years," (Concluded on Page 4, Column 4)

## Loophole Seen for Salesman Coverage Under Social Security

NEW YORK CITY—Whether or not the Gearhart Bill passed by Congress over a Presidential veto will exclude commission salesmen from old age benefits appears to be a moot question at the moment.

According to widely-published reports, the new Social Security Law denies to wholesale salesmen the benefits assured them by two Supreme Court decisions a year ago.

But after conferring with officials of the Federal Security Agency, the Washington counsel for the National Association of Women's and Children's Wear Apparel Association said commission salesmen whose activities are controlled "substantially" by employers will not be excluded from coverage.

"Under the new law," declared the counsel, Andrew P. Federline, "it is anticipated that there will be no radical change in past practice of determining whether or not the salesman is an 'employee' in the eyes of the law.

"Technically, the question will depend upon whether or not the employer-employee relation exists under (Concluded on Page 4, Column 5)

## Distributor Drops All But Major Appliances

NEWARK, N. J.—Moving ahead on a program of straight line merchandising, Krich-Radisco, Inc., veteran appliance wholesaling firm here, has announced to dealers its withdrawal from the merchandising of specialty products.

The move, made shortly before the election of Barney G. Krich, Andrew K. Leach, and William W. Cone as vice presidents in charge of Bendix, Norge and RCA Victor respectively, affects the following lines: Eureka Products, New Home sewing machines, Knapp-Monarch appliances, Vornadofan air circula-

(Concluded on Page 4, Column 3)

## Prices May Be News at Mart Opening July 5

CHICAGO — With not too much excitement in terms of new appliance models anticipated, much of the attention of department store buyers and independent dealers at the annual Summer Homefurnishings Markets opening here next Monday, July 5, will probably center about possible price changes.

Hotel reservations indicate heavy attendance at the showings at the American Furniture Mart and the Merchandise Mart which will continue through July 17. The opening day, July 5, is generally being celebrated as a legal holiday, but the Marts officially open on that day and most of the exhibiting firms seem to be making their plans accordingly.

While some new range and washer models may show up, there is no indication up to now that there will be any "surprises" in the refrigerator lines.

(Location of firms displaying at the Summer Homefurnishings Market will be found listed on page 29 of this issue.)

## Reorganization Plan Of American Coils Is Given Approval

NEWARK, N. J. — On June 11 Judge Smith of the U. S. District Court here placed final court approval on the reorganization plan of the American Coils Co., Newark, manufacturer of air conditioning and refrigeration equipment.

The plan was recommended by Trustee Andrew B. Crummy on details furnished by the new officers of the company and approval of the plan had been signified by holders of 92% of the stock.

Immediately following the favorable decision, stockholders met at company offices to elect a board of directors. Those elected were Michael Parcaro, H. A. Thibault, Sylvan Hirsh and J. J. Brody. Parcaro was then elected president, Thibault executive vice president and general sales manager of the firm. Brody is secretary-treasurer and is also in charge of manufacturing.

Thibault announced the setting-up of new, firm sales and service policies. He said distribution of all Amcoil products would continue through recognized wholesale refrigeration outlets.

### 6% Do 50% of Volume

## Over-Franchised Area Crowds Out the Legitimate Dealer, Says Retail Group

PHILADELPHIA — An overflow luncheon meeting called by the newly-formed Retail Electrical Merchants Association here heard the group's managing director charge that from a retail angle, the radio, television, and appliance business "has degenerated to a point where many of the most substantial retailers are seriously thinking of getting out."

The director, J. J. McCormick, told dealers, department store representatives, and distributors gathered in the Benjamin Franklin hotel here that most established retailers blame their current problems on excessive franchising by nearly all distributors.

"For many years," McCormick said, "it was generally accepted that 80% of retail business was done by 20% of the dealers.

## Licensing by Law Of Contractors Is Blasted by ACRMA

WASHINGTON, D. C.—"Registration or licensing of air conditioning and refrigeration contractors is contrary to the best interests of the public and of the air conditioning and refrigeration industry," declares a formal statement by the Board of Directors of the Air Conditioning and Refrigerating Machinery Association at a meeting at Hot Springs, Va.

In unanimously adopting a statement of policy on the subject, these industry leaders drew particular attention to the possibility of abuses "inherent in contractor licensing and its effect on users of the industry's products."

Text of the statement follows: "ACRMA believes that registration or licensing of air conditioning and refrigeration contractors is contrary to the best interests of the public and of the air conditioning and refrigeration industry.

"Licensing requirements provide a ready and convenient channel for abuses such as the limiting of competition by excessive fees, through unreasonable requirements, and through administration by examining boards and enforcement agencies which may be less than impartial. Excessive fees, unreasonable examination requirements, and similar features tend to limit free and competitive enterprise and create barriers to interstate and inter-community commerce.

"Licensing charges must be reflected in higher over-all costs of air conditioning and refrigeration installations, to the buyer, without any assurances of quality of equipment, proper installation, and safe operation of air conditioning and refrigeration installations."

## March NEMA Freezer Sales Had Tendency To Smaller Sizes

NEW YORK CITY—Sales of home and farm freezers by the companies reporting to National Electrical Manufacturers Association (Nema) for March totaled 44,906 units. Total for the first three months was 115,746 freezers.

In March, the under 5-cu. ft. size was by a considerable margin the biggest classification, as contrasted to the three-months figure in which the 7 to 8.9 cu.-ft. size was in the No. 1 position.

(Tabulation of Nema home freezer sales for March and the first three months will be found on page 32.)

## New G-E Listing Reflects Varied Price Increases

BRIDGEPORT, Conn. — Price increases which General Electric announced June 17 on some of its appliances are selective, and vary widely by product.

Wage increases recently granted G-E factory workers, coupled with rising materials and freight costs, necessitated the increases, the company stated.

Recalling that G-E appliance prices were lowered Jan. 1, the company emphasized that the new increases are "selective." In some cases they wipe out earlier reductions; in others they are higher than the prices existing before the reductions, and in many cases there have been no upward adjustments at all.

Following is a comparison of the new G-E appliances prices with those in effect in December, 1947; and on Jan. 1, 1948.

### APPLIANCE PRICES

Product	Dec. 1947 Price	Jan. 1948 Price	New Price
<b>REFRIGERATORS</b>			
NB-8	\$239.75	224.75	245.00
NC-8	259.75	249.75	269.00
NF-8	299.75	284.75	315.00
NB-10	299.75	284.75	315.00
NF-10	349.75	334.75	349.00
NH-8	399.75	379.75	410.00

4	239.75	239.75	239.75
8	329.75	329.75	330.00

<b>RANGE</b>			
AP-1-48	149.75	144.75	159.95
CT-1-48	189.75	169.75	189.95
CD-1-48	259.75	249.75	274.95
DD-1-48	334.75	324.75	359.95

<b>WATER HEATERS</b>			
EG 15-1	94.75	89.75	99.95
EG 30-7	124.75	119.75	132.95
EG 30-1	114.75	112.75	124.95
EG 30-2	124.75	119.75	132.95
EG 40-1	127.75	122.75	135.95
EG 40-2	134.75	129.75	143.95
EG 52-1	139.75	132.75	146.95
EG 52-2	149.75	139.75	154.95
EG 66-1	154.75	152.75	169.95
EG 66-2	164.75	159.75	177.95
EG 82-1	179.75	172.75	191.95
EG 82-2	189.75	179.75	199.95
EM 30-2	199.75	189.75	189.75
EM 40-2	229.75	219.75	219.75
EM 50-2	299.75	279.75	279.75
EM 80-2	379.75	359.75	359.75

<b>HOME LAUNDRY GROUP</b>			
AW 432 Washer	.....	169.75	179.95
AW 331 Washer	.....	139.75	149.95
AW 332 Washer	.....	149.75	159.95
AW 132 Washer	.....	129.75	139.95
AW 131 Washer	.....	119.75	129.95
AF 12 Ironer	.....	229.75	229.75
AF 12-B Ironer	.....	199.75	199.75
AR 17 Ironer	.....	49.95	49.95
AR 18 Ironer	.....	79.95	79.95
AR 19 Ironer	.....	159.75	169.95
AR 20 Ironer	.....	179.75	199.95
AD 6 Drier	.....	229.75	229.75
AW 6 Washer	.....	349.75	349.75

<b>ELECTRIC SINK</b>			
DE Sink	339.50	324.75	349.95
BE Free standing dishwasher	244.50	234.75	249.95
AE Drop In	224.50	199.75	214.95
AN Drop In	.....	.....	.....
Stainless Steel Disposal	239.50	209.75	224.95
Disposal	124.50	118.75	124.95

<b>AUTO. BLANKET &amp; SUNLAMP</b>			
PB-5-A1	42.01	39.85	41.95
PB-5-A2	52.53	49.85	52.95
PB-5-A4	39.89	37.85	39.95

<b>HEATERS</b>			
PH-1-A Arizona	15.73	15.73	15.95
PH-2-A Sunbowl	8.69	8.69	8.95
PH-4-A1 Built In	.....	15.50	16.95

<b>HEAT PADS</b>			
PS-4-A2	4.95	4.75	4.95
PS-5-A2	5.95	5.75	5.95
PS-6-A2	6.95	6.75	6.95
PB-10-A1	.....	7.95	7.95
Footwarmer	.....	29.95	29.95
PL-3-A1 Sunlamp	.....	5.75	5.95
PL-4-A1 Heatlamp	.....	.....	.....

<b>CLOCKS</b>			
Kitchen 2H20	4.95	4.50	4.95
Kitchen 2H08	5.95	5.50	5.95
Kitchen 2H02	6.95	6.50	6.95
Kitchen 2H18	7.95	7.50	7.95
Alarm 7H160-L	5.95	5.50	5.95
Alarm 7H118-L	6.95	6.50	6.95

<b>TABLE APPLIANCES</b>			
F 18 Iron	8.36	7.95	7.95
F 22 Iron	.....	7.95	7.95
F 23 Iron	12.57	11.95	11.95
F 30 Steam Iron	18.88	17.95	17.95
MS Mixer	34.66	32.95	34.95
C19 Roaster	36.77	36.75	38.95
P350 Broiler	8.95	8.95	9.95
K5 Cabinet	.....	12.95	14.95
T-77 Toaster	19.94	19.95	19.95

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F			



# Quicfreez TRIZONE

**NORMAL REFRIG. TEMP.** **FAST FREEZE**

**SANITARY'S PREWAR COMBINATION Farm Freezer** is again available for immediate shipment. . . . Suggested consumer price only \$399.50. . . .

**MODEL NO. C-1148**

4½ cu. ft. of 35-50°F. Refrigeration combined with 6¼ cu. ft. of zero frozen storage.  
Size: 48½" W. X 28" D. X 40¾" H.  
Frozen meat capacity—250-300 lbs.  
¼ H.P. hermetic, quiet-type condensing unit  
60 cycle 115 volts A.C.

**FROZEN STORAGE**

**SANITARY REFRIGERATOR CO. FOND DU LAC, WIS.**  
ICE REFRIGERATORS FOR MORE THAN 40 YEARS FARM FREEZERS SINCE 1939

## Crosley Distributors To Convene June 28 At Cincinnati Plant

CINCINNATI — Crosley distributors from throughout the world will convene in Cincinnati on June 28, 29, and 30 to view a complete new line of Crosley radio and television home receivers.

The meeting is the second of the year for Crosley. On March 22, 23, and 24, distributors were introduced to a new line of Crosley Shelvador refrigerators.

A new television set is expected to be one of the top attractions. Stanley Glaser, manager, radio and television section, said that Crosley's line of video receivers will be strengthened with the addition of a special new set in the "larger" direct-viewing tube class.

Corley W. Kirby, domestic sales manager, said that promotional plans on Crosley's Shelvador refrigerators, gas and electric ranges, and the Frostmaster frozen food cabinet will also be presented at the meeting.

## Smith Assistant Head Of G-E Coast District

SAN FRANCISCO — H. Gordon Smith has been appointed assistant district manager of General Electric appliance sales in the Pacific District.

Smith has moved to San Francisco from Jacksonville, Fla., where he served as local manager of appliance sales since he joined the company three years ago.

## Sales Picture on Non-Electric Ranges Since 1946

TABLE I

From Statistics Prepared by the Bureau of the Census on Manufacturers of Non-Electric Cooking Ranges and Stoves

	12-31-46	3-31-47	12-31-47	3-31-48
Unfilled Orders .....	1,857,000	1,599,000	1,038,000	850,000
Inventory—Units .....	52,000	60,000	67,000	133,000
Production—Units .....	2,811,000	887,000*	3,485,000	1,018,000*
Shipments .....	\$220,851,000	\$57,926,000*	\$250,083,000	\$72,012,000*
Average Unit Price .....	\$65.00	\$66.50	\$72.50	\$78.00

\*3 months only

TABLE II

Operating and Earning Ratios of Manufacturers of Non-Electric Cooking Ranges and Stoves

	10 Identical Companies	21 Identical Companies
	1939	1947
Net Profit on Sales .....	8.05%	8.68%
Net Profit on Net Worth .....	8.1%	17.28%
Receivables—Turnover-Days .....	78.5	33.6
Inventory—Turnover-Days .....	90	71
Liquid Assets to Current Debt .....	452%	131%
Fixed Assets to Net Worth .....	34%	51.7%

## Change To Buyers' Market Is Seen In Study of Non-Electric Range Movement

NEW YORK CITY—Many signs suggest that non-electric cooking ranges and stoves are in the process of change from the sellers' to the buyers' market, says the National Credit Office, Inc., here.

A report by William A. Duvel, assistant manager of National Credit's Metals Division, declares:

"The indications of this movement have become increasingly clear since the close of 1947 as manufacturers' production expanded, pipelines filled, dealer inventories reached high levels, and consumer demands became more normal."

Statistics prepared by the Bureau of the Census covering unfilled orders, inventory, production, shipments, and average unit price (see Table I) reflect the trend toward the buyer's market, Duvel points out. Among other things, these figures show that inventory of finished units in manufacturers' hands has increased 157% in the 15 months ended March 31, 1948.

"This is also an indication of the return to normal," Duvel notes, "as business usually is at a low point on Dec. 31 and stocks are subsequently built up for spring shipments. Unit production has gained favorably in the last two years, but did not reach the prewar peak of 1941 because of procurement difficulties."

According to Duvel, there are now 124 plants manufacturing gas ranges and coal, wood, oil, kerosene, gasoline, and combination stoves. This compares with about 100 prewar.

"Practically the entire expansion has been the result of new plants being added by existing companies," he states. "New concerns have been discouraged from entering this

field because of the sizable fixed investment required, combined with the difficulty of obtaining steel."

Included in Duvel's report is a study reflecting the financial condition of 10 identical manufacturers at the end of 1939 and 1947 and of 21 identical manufacturers at the end of 1946 and 1947. The statements, it is explained, were prepared by combining the individual statements of the companies concerned and then reducing the composite figures to an average.

"The portion of the study dealing with operating and earning ratios is reproduced in Table II.)

"The financial condition of the industry," Duvel concludes, "is obviously excellent."

Turning to the picture on competition, Duvel says manufacturers of non-electric stoves and ranges are being aggressively challenged for their market by the manufacturers of electric ranges. Electric range producers number about 25, he states, adding that several manufacturers produce both types.

"In 1947," the report continues, "about 1,300,000 electric ranges were produced in contrast to 3,485,000 non-electric types. Electric ranges represented 27% of the total, but in 1941 electric units obtained less than 14%. This was accomplished despite the fact that the standard electric range in 1947 was approximately \$33 higher in price than the standard gas range."

"The oil and gas shortages plus the coal strikes and the higher cost of these fuels has further accelerated this trend. The rural electrification program has opened up new sales potential for electric ranges."

## Range Display Piece To Fit Into Unit Space

BRIDGEPORT, Conn.—A flashing neon "Calrod" display unit which demonstrates to prospective customers the heat distribution of General Electric range units is now available to the company's retailers.

The unit replaces the right front giant Calrod unit on current G-E range models in retail stores. It comes completely assembled with trim-ring, center medallion, support brackets, and transformer.

A flasher arrangement operates the inner coil of the display and illustrates the heat distribution which results from the Calrod unit's second, or frying, heat. When the entire unit is lighted, the Calrod's high heat is visualized.

The display is available through General Electric distributors at \$25.

## \$84,272 In Appliances Sold at Electric Show

NASHVILLE, Tenn. — Exhibitors in the Nashville Electric Show, staged for the general public from May 18 through May 22, sold \$84,272 worth of appliances, William D. Hall, sales promotion manager for the Nashville Electric Service, has reported.

The show, sponsored by the Nashville Electrical Dealers Association and the utility, drew 30,576 visitors, he added.

Unit sales on four major appliances were as follows: refrigerators 152, ranges 119, water heaters 39, and home freezers 17. In addition, the exhibitors, 29 local dealers and distributors, received 1,798 "good prospects" for these four appliances as a result of exhibitions at the show.

## How can you possibly beat Bundyweld\* for refrigeration tubing?

Consider Bundyweld from every angle . . . compare Bundyweld with any other tubing—then ask yourself, "Can I possibly beat Bundyweld for my tubing needs?"

Here, at a glance, are some facts worth considering:

BUNDYWELD IS STRONGER  
... IT'S DOUBLE-WALLED  
FROM A SINGLE STRIP

HIGH FATIGUE  
STRENGTH

EASY AND FAST  
TO FABRICATE

THINNER WALLS,  
YET EQUAL STRENGTH  
... FASTER COOLING

ALWAYS HELD TO  
CLOSE DIMENSIONS

COST IS LOW

These are only a few of the reasons makers of better refrigeration equipment choose Bundyweld Steel Tubing for condenser and evaporator coils, compressor lines and connecting tubes.

By any analysis, Bundyweld has proved its superiority. Whatever your tubing needs, investigate Bundyweld Tubing now. Available in steel, Monel or nickel . . . all double-walled from a single strip.

Contact your nearest Bundy representative listed below. Or write Bundy Tubing Co., Detroit 14, Mich.

# BUNDY TUBING

ENGINEERED TO YOUR EXPECTATIONS  
\*REG. U.S. PAT. OFF.

## WHY BUNDYWELD IS BETTER TUBING

1 Bundyweld Tubing, made by a patented process, is entirely different from any other tubing. It starts as a single strip of basic metal, coated with bonding metal.

2 This strip is continuously rolled twice laterally into tubular form. Walls of uniform thickness and concentricity are assured by close-tolerance, cold-rolled strip.

3 Next, a heating process fuses bonding metal to basic metal. Cooled, the double walls have become a strong, ductile tube, free from scale, held to close dimensions.

4 Bundyweld comes in standard sizes, up to 3/4" O.D., in steel (copper or tin coated), Monel or nickel. Special sizes can be furnished to meet your requirements.

## BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES:

Austin-Hastings Co., Inc. 226 Binney St. Cambridge 42, Mass.	Peirson-Deakins Co. 823-824 Chattanooga Bank Bldg. Chattanooga 2, Tenn.	Lapham-Mickey Co. 3333 W. 47th Place Chicago 32, Ill.	Rutan & Co. 404 Architects Bldg. Philadelphia 3, Pa.	Pacific Metals Co., Ltd. 3100 19th St. San Francisco 10, Calif.	Eagle Metals Co. 3628 E. Marginal Way Seattle 4, Wash.	Alloy Metal Sales, Ltd. 881 Bay St. Toronto 5, Canada
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Bundyweld nickel and Monel tubing is sold by International Nickel Company distributors in all principal cities.

# PERSONALIZED SERVICE

# CHASE

CONVENIENT ONE-STOP SERVICE

CHICAGO'S OLDEST SUPPLY HOUSE

## REFRIGERATION SUPPLY CO.

546-48 W. 119th STREET CHICAGO 28, ILL.





**METER-MISERS BUILT IN AIR-CONDITIONED "GLASS HOUSE."** Strict temperature and humidity control maintains ideal conditions; prevents corrosion of parts. Dimensional fluctuation of parts and of delicate inspection instruments is prevented. Dust is practically non-existent—another essential for making "sealed-for-life" Meter-Misers to Frigidaire's rigid standards.



**COMPLETE MOISTURE REMOVAL FOR LONGER LIFE.** Frigidaire research has developed a new, highly-efficient method of removing any moisture from Meter-Miser. All units are dehydrated with a low voltage charge of electricity which completely removes any moisture within the sealed unit. This is typical of the ways Frigidaire guards quality.

## WHAT FRIGIDAIRE QUALITY LEADERSHIP MEANS TO FRIGIDAIRE COMMERCIAL DEALERS

Frigidaire is world-famous for quality—and for excellent reasons. The famous Frigidaire Meter-Miser, for example, is produced under scientifically controlled conditions, meets quality standards unsurpassed in the industry. And the quality that is built into the Meter-Miser is typical of the care exercised in the production of all Frigidaire products.

What does this Frigidaire quality leadership mean to Frigidaire commercial dealers? It means these four important things.

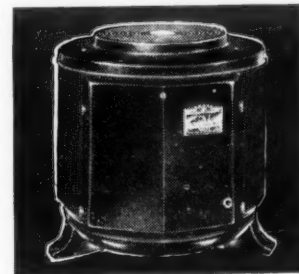
First, it gives them an important selling advantage. Frigidaire's quality products sell more easily to new

customers, and attract many more repeat customers.

Second, it helps keep operating costs low, service costs to a minimum. For Frigidaire quality pays off in efficient, trouble-free operation.

Third, it helps Frigidaire commercial dealers increase their own reputations for leadership—their most valuable business asset.

Fourth, and most important, Frigidaire quality leadership means greater profits for Frigidaire commercial dealers now and in years ahead. And that's only one of many ways in which Frigidaire leadership is helping Frigidaire commercial dealers build better business.



**The Revolutionary New Commercial Meter-Miser** refrigerating mechanism for remote installations brings amazing efficiency, dependability and economy of operation—qualities enjoyed by owners of more than 5 million Meter-Miser-equipped Frigidaire refrigerators, home freezers, beverage coolers, ice-cream cabinets, water coolers, and air conditioners.

### GREATER QUALITY MEANS GREATER SALES AND PROFITS FOR FRIGIDAIRE DEALERS



You're twice as sure with two great names

**FRIGIDAIRE**

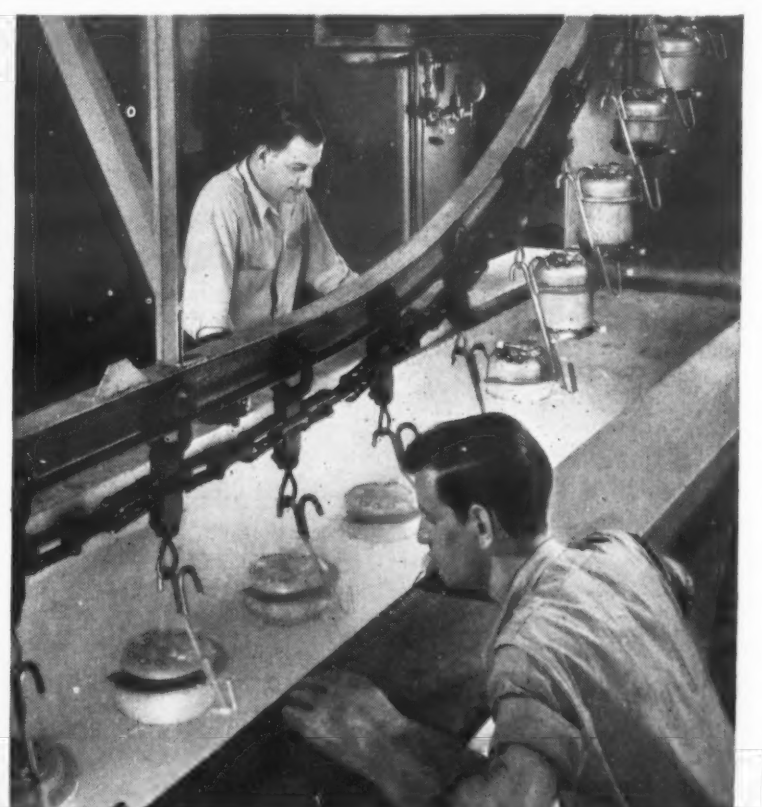
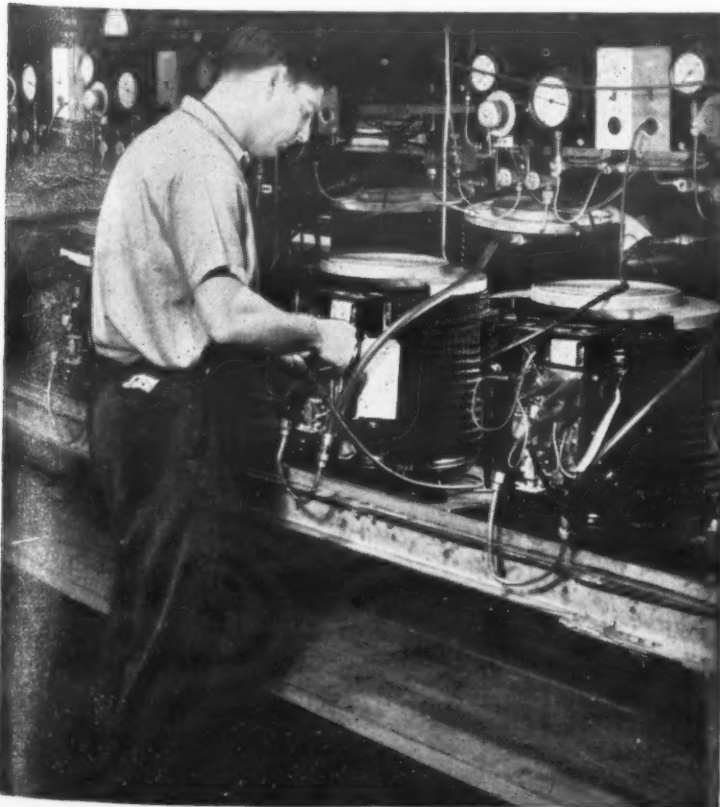
made only by

**GENERAL MOTORS**

**"BREAK-IN" TEST — FINAL CHECK.** Here, completed Meter-Misers are given a running test of four hours before being released for crating and shipping. Units tested for voltage, quietness, refrigeration capacity and complete operating performance. Every one must come up to the highest standards.

**QUALITY CAN BE MEASURED.** In the Glass House, electro-limit gauges and Frigidaire-developed radial clearance gauges check dimensions down to the last ten-thousandth of an inch and position Meter-Miser parts precisely, insuring quietness, efficiency and durability.

**LEAK-TEST — SIMPLE BUT EFFECTIVE.** To make sure the Meter-Misers are permanently sealed against loss of refrigerant or entrance of dirt and air, the units are filled with compressed air and placed in warm water for three minutes. Another test to help assure trouble-free service!





see your **"DETROIT"**  
**WHOLESALE**  
for  
**Expansion Valves**  
**Solenoid Valves**  
**Controls**

**"DETROIT"**

DETROIT LUBRICATOR COMPANY General Offices: 5900 TRUMBULL AVENUE  
DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & STANDARD SANITARY CORPORATION  
Canadian Representatives: RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories  
"Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

EXPORT DEPARTMENT—Box 218, Ridgefield, New Jersey

## Distributor Drops --

(Concluded from Page 1, Column 2)  
tors, Westclox electric clocks, Seth-Thomas electric clocks and American Central kitchens.

Stated Paul R. Krich, executive vice president of Krich-Radisco, in explaining the move:

"We are convinced that concentration applied to the wholesale distribution of radio, television, records and major appliances, such as RCA Victor, Norge, and Bendix, will produce an unlimited volume of business, both new and replacement.

"Our franchised dealers are definitely helped by this move," continued Krich, "since we direct our full attention to the promotion of major lines on a vertical merchandising plan.

"Our dealers now have a direct line to management through contact with the district manager. Between him and policy level we have shortcut the usual sales and merchandising steps. With each of our three divisional vice presidents on our sales board, our dealers receive the benefit of combined strategy."

## Jackson Takes Over Sales for South Carolina Distributor

CHARLESTON, S. C. — Appointment of Willis O. Jackson as general sales manager for Cannon Distributing Co. of Charleston and Columbia has been announced by Norman L. Cannon, president.

Jackson, who was formerly with the lamp division of Westinghouse Electric Corp., will maintain his office at Charleston.

## For Simplified Kitchen Tasks



This range is equipped with a set of five heat control buttons for each of its four burners plus another series for the oven. They glow red, yellow, violet, green, or blue to indicate the particular heat setting.

## 'Pushbutton' Range-- Loophole Is Seen..

(Concluded from Page 1, Column 2)  
bringing the consumer an entirely new appliance based on the modern acceptance of pushbutton operation."

He said the range represents more than four years of engineering and development work in laboratories and homes. It does not displace other models now being produced.

The pushbutton control panel is located on a high backsplash, with lighted buttons "fully visible" above utensils on the range. The backsplash can be tilted forward for servicing of controls and in this position, power is automatically cut off. Oven and surface units also can be serviced from the front of the range.

The cooking surface is illuminated by a 36-in. fluorescent lamp in the backsplash. Other announced highlights are the raisable thrift cooker unit, removable aluminum drip trays under surface units, more storage space, and a new timer clock.

According to Truesdell, a five-point merchandising theme will be adapted to a national advertising campaign as a basic policy. This policy will become effective Aug. 1, when all promotional materials will highlight the new product.

The five points to be emphasized are: "Simplicity and ease of operation, faster operation, new accuracy in 'cooking by color,' greater cooking convenience, and new appearance."

Special promotional and sales aids on the range have been developed for dealers. These include a panel floor display with colored breaker lights to dramatize the color theme and a color slide film entitled "It's a Knockout."

(Concluded from Page 1, Column 2)  
the common law, which in very simplified language means whether or not the employer exercises a substantial degree of control over the salesmen's activities."

However, Leonard Lesser, first vice president of the National Council of Salesmen's Organizations, pointed out that in restoring the common-law definition of the word 'employee,' the law excludes certain classes of commission workers.

(The council attempted to block passage of the Gearhart Bill. Having failed, the group urged the platform committee of the Republican convention to include in its 1948 platform a specific promise to "correct the injustice" of the law. A similar plea was to be sent to the Democratic platform committee.)

Lesser claimed Supreme Court decisions last year held that the common law "master and servant" meaning of "employee" was not intended in the Social Security Act of 1935. He said Congress intended "employee" to mean anyone employed by another regardless of the method of compensation.

"Under the Gearhart bill, wholesale salesmen and others who have been covered by Treasury Department regulations promulgated after the Supreme Court decisions may not be excluded now from social security benefits, which would bring about the anomalous situation of two classes of employees doing the same work for the same employer, with only the older employee having social security taxes deducted," he said.

Mitchell M. Shipman, general counsel of the salesmen's council, charged that "the confusion existing prior to the Supreme Court decisions has now been legalized."

"All the new law can do is encourage those employers who lack any sense of social responsibility to escape their security tax obligation," he said.

On the other hand, Federline stated that if any employer fails or refuses to pay the old-age insurance tax on the earnings of any commission salesman who technically is an "employee," "he can be compelled to do so by proper means which the Federal Security Agency and the Treasury Department will provide."

Every commission salesman who has been or will be regarded by his employer as an "employee" and on whom the employer pays the tax to the old-age insurance fund usually will be regarded by the FSA as an "employee" entitled to old-age pension benefits, Federline declared. A "large number" of salesmen will continue to be covered, he asserted.

## New G-E Price List --

(Concluded from Page 1, Column 5)

### TABLE APPLIANCES (Cont.)

W-4 Waffle Iron	10.47	9.95	11.95
W-8 Waffle Iron	14.60	13.95	15.95
W-9 Waffle Iron	16.78	15.95	17.95
G-37 Sandwich Grill	13.95	13.95	14.95
G-38 Sandwich Grill	15.95	15.95	16.95
P-150 Sandwich Grill	4.00	4.00	4.00
P-14 Coffee Maker	4.95	3.95	3.95
P-15 Coffee Maker	10.47	8.95	8.95
P-16 Coffee Maker	7.31	6.95	6.95
P-17 Coffee Maker	13.62	10.95	10.95
P-18 Coffee Maker	18.82	17.95	17.95

### FANS

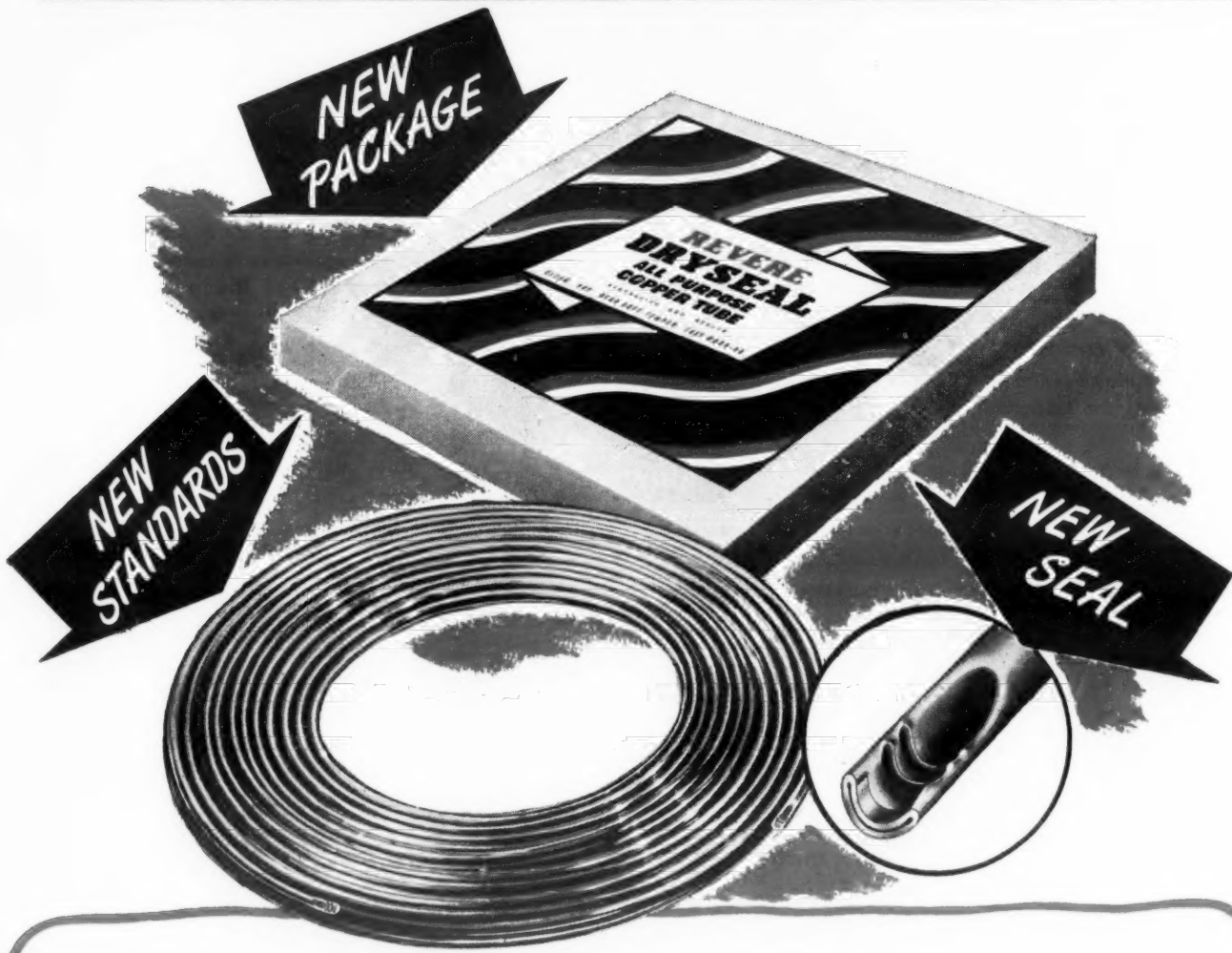
FM10S41 Styled	.....	15.74	16.95
FM10V21 Verta	.....	25.22	27.95
FM12V1 Verta	.....	38.91	41.95
FM16V1 Verta	.....	48.38	49.95
FM12M21 Ped	.....	52.59	59.95
FM16M1 Ped	.....	66.23	69.95
FM4M1 Ped	.....	115.77	119.95
49X929 Ped	.....	33.64	35.95
78X233	.....	39.96	41.95
FM10W1 Vent.	.....	44.17	44.95
FM10C1 Vent.	.....	47.33	49.95
34029 Vent.	.....	38.91	39.95
44989 Cell.	.....	79.97	89.95
FM24W1 Home Cooling	.....	98.95	98.95
FM30K1 Home Cooling	.....	105.95	105.95
FM30K11 Home Cooling	.....	123.95	123.95
FM42K21 Home Cooling	.....	147.95	147.95
FM48K11 Home Cooling	.....	193.95	193.95

## Sun Valley Air Conditioning Set Up In Phoenix, Arizona

PHOENIX, Ariz.—Sun Valley Air Conditioning Co. is the firm name under which Richard F. Lowther and Harold L. Barbee have published a certificate that they are conducting business in Phoenix.

**NIAGARA**  
**AEROPASS\* CONDENSER**  
... increases refrigeration plant capacity, saves power and water.  
Patented features: "duo-pass" coil keeps condenser tubes free from scale; "oil-out" constantly cleans oil and dirt from the refrigerant. "Balanced Wet Bulb Control" maintains minimum practical compressor head pressure.

**NIAGARA BLOWER COMPANY**  
30 Years of Service in Air Engineering  
405 Lexington Ave. New York 17, N.Y.  
\*Trade-mark registered



NOW—MORE THAN EVER ...  
the important thing to know about  
refrigeration tube is

**IT'S REVERE!**

Until now, all Revere Dryseal Copper Refrigeration Tube — regardless of diameter — has been made with an .035" wall. Now Revere is the first to offer you refrigeration tube in new, more economical dimensional standards.

In addition, the new Revere Dryseal Tube has a double-groove mechanical seal. It is compact enough to pass through any opening large enough for the tube itself. It permanently keeps the interior of the tube clean and bone dry.

Look for the new red and blue Revere Dryseal package. It protects the tube, takes up less storage space and is easier to unpack.

Revere Dryseal Tube comes in sizes from 1/8" to 3/4" O.D. and is packed two 50-foot coils to a package.

Ask your Revere Distributor for all the new facts on the new Dryseal—the easy-to-bend copper refrigeration tube that assures you of fine quality in every length you buy.

**REVERE**  
**COPPER AND BRASS INCORPORATED**  
Founded by Paul Revere in 1801  
230 Park Avenue, New York 17, New York  
Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; New Bedford, Mass.; Rome, N.Y.—Sales Offices in Principal Cities.





# Down on the farm they're ripe for Home Freezers

There's a great and rapidly growing market for Home Freezers and Storage Cabinets among the farm families of the country. Farm purchasing power is at an all-time high. Rural electrification is adding more than 500,000 potential new customers a year to the 3,500,000 farms already wired for electricity. The community frozen food locker, which first introduced them to the convenience and economy of quick freezing and storage, has helped make farmers frozen-food-conscious. Farm wives welcome the freedom from long and arduous hours of canning and other food preparation that quick freezing offers. Authorities estimate the potential rural demand for home freezers at more than 300,000 units a year for several years to come.

The greater part of this demand is for combination chests which offer both quick freezing facilities and ample storage space. Studies indicate that at least 4 feet of storage space per family member is desirable, which points to combination boxes with 18 to 20 cubic feet as being the minimum that

could be expected to have heavy demand in this market. Style of box preferred varies according to the location assigned in the home or utility room.

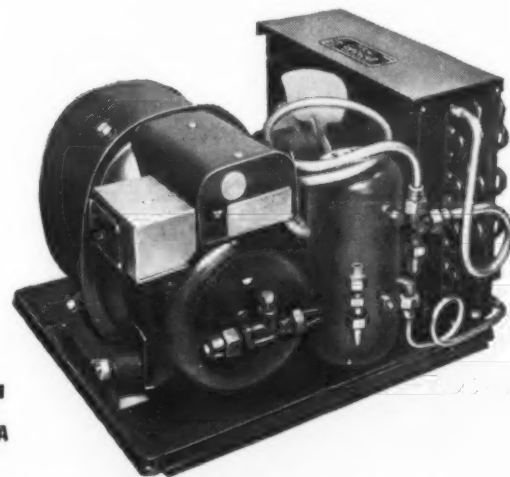
Servel Supermetics have proved a fitting companion for this type of installation. Farm families especially need a refrigeration system that provides dependable, trouble-free service. The alert Servel dealer will quickly recognize this fact as a selling advantage. For, with Servel Supermetic he not only has a complete selection of condensing unit sizes, adaptable to fixtures of all types, but he is also offering his prospect dependable and economical performance. Further, the Servel Supermetic is hermetically sealed—protected from dust and dirt. Its compact design saves valuable space. Installation costs are held to a minimum, because Servel Supermetic is completely wired, connected, ready to use.

Write for the new descriptive folder, "Servel Supermetic," which contains full details on all models. Address Servel, Inc., Division ER6, Evansville 20, Indiana.

**Steinhorst Farm-Home Freezer Model WH 18½**, manufactured by Emil Steinhorst & Sons, Inc., Utica, N. Y., prominent in refrigeration for over 35 years. The Electric Refrigeration Division of Servel, Inc., manufactures condensing units only, available everywhere through leading distributors and fixture manufacturers.



**Servel Supermetic Model L2B**, air-cooled, two-cylinder, ½ HP unit, a hermetically sealed model widely used for farm and home freezers, and for other low temperature applications. Fractional horsepower units are available in ¼, ½, ¾ and 1 HP sizes. Integral models, both air- and water-cooled, also offered in all sizes through 3 HP. Where odd-frequency or direct current is required, a line of Servel air-cooled belt-driven units is available.



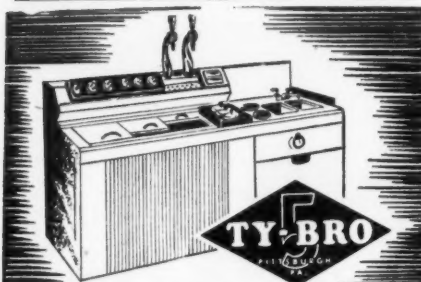
## Servel Inc.

ELECTRIC REFRIGERATION DIVISION, EVANSVILLE 20, INDIANA

This is Number Nineteen in a series of advertisements featuring the markets available to the alert dealer in the commercial refrigeration industry. Ask for reprints for use in training your salesmen to take full advantage of all commercial refrigeration markets.







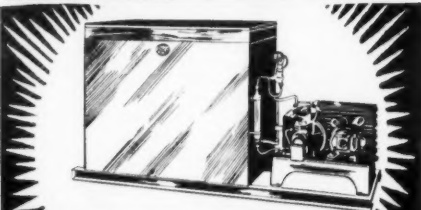
### TY-BRO BUILDS FOR YOU

Designers Manufacturers  
RESTAURANT AND BAR EQUIPMENT

- Soda Fountains • Direct Draw Draft Beer Systems • Salad Chops • Duct Controlled Bottle Coolers • Sinks • Walk-ins • Reach-ins • Urn Stands • Work Boards • Coil Boxes • Canopies • Wall Siding • Utility Cabinets

Write today for literature and price list

**TYSON** METAL PRODUCTS CO.  
6815 Hamilton Ave.  
Pittsburgh 8, Penna.



### BULK and CUBE ICE MAKERS

#### FOUR SIZES — PROMPT DELIVERY

• 250 • 1000  
• 500 • 2000

#### LBS. DAILY CAPACITY

Self Contained and Remote Electric,  
Gasoline or Diesel Engine Driven Units.  
(Refrigeration Engineering Corp.)

**RECO PRODUCTS DIVISION**  
2020 Naudain Street, Phila. 46, Pa.

## Case Wins Baker New Patrons For Whipped Cream Specialties

NASHVILLE, Tenn. — Another baker who has found excellent profit possibilities in refrigerated-case merchandising of whipped cream specialties

AT RIGHT: The Cupboard Bakery's new Selb refrigerated case.



is R. R. Griffin, owner of The Cupboard Bakery in the Hillsboro section of Nashville.

Griffin spent \$700 for a new Selb 4-shelf, all-white porcelain display case, which is installed in the center-rear of the bakery. Products which he has experimented with and found capable of an excellent sales volume since early March include whipped cream cakes, Boston cream pies, eclairs, whipped cream puffs, combination custard and whipped cream pies, and most attractive, ready-made shortcake.

The Cupboard Bakery is located close to Vanderbilt university, the Ward-Belmont Girls School and Peabody College, whose students have proven excellent customers for cream puffs, eclairs, and Boston cream pies, according to Griffin.

Most important feature of the installation of the refrigerated case has been the development of a large new list of regular customers.

"Many neighborhood women who normally did not buy a great deal of

baked goods are coming in regular for cream puffs, eclairs, whipped cream cakes, etc., for afternoon teas, bridge parties, etc.," the proprietor said. "Merely by putting a small sign in each window, indicating that we carry a complete line of refrigerated, whipped cream baked products, we have managed to establish a considerable patronage over and above our regular bakery trade."

The Cupboard Bakery has recently been remodeled with the addition of a new 3-door dough-retarding box and storage refrigerator.

### A. & P. Advertises Air Cooling

ROANOKE, Va.—A "shop in air conditioned comfort" line "topped" a six-column advertisement published in local newspapers by the A. & P. store at 28 East Salem Ave. here.

## Intricate Refrigerated Storage System Helps Hotel Serve 'Home-Cooking'

### Food Preparation Plotted To Save Time

RENO, Nev. — A wide variety of food storage refrigerators, installed by Morris Refrigeration Co. here are helping Reno's new 300-room Hotel Mapes build a reputation for fine food service.



AT RIGHT: Doors leading to sharp freeze sections inside meat cooler at the Mapes hotel in Reno.

Promoting the theme, "We believe in old fashioned cooking," the Mapes kitchens prepare every item on the menu to order, with high speed scheduling and specialization by each food service employee. Retaining large quantities of menu item ingredients on hand at peak quality has demanded maximum use of refrigeration.

The salad bar typifies the variety of refrigerators utilized. At the front end of the bar, where waiters enter to begin an oval pattern of selecting and picking up menu items, is a five-case dry beverage cooler with swinging lid. From this waiters may select soft drinks, milk, or beer while giving the salad order.

Salad ingredients are kept in a two-door reach-in refrigerator directly behind a wooden make-up table. They are visible through clear glass doors to make it easy for the salad man to inventory his stock at a glance.

This box is kept at 38°F. and is equipped with a second condensing unit to take over if the first should fail.

Next to the salad table is a 10-hole ice cream cabinet from which the salad man serves ice cream orders. Nearby is an 8 ft. by 8 ft. walk-in refrigerator for dairy products and salad ingredients. The walk-in also has a two condensing unit proviso against breakdowns.

The bakery behind the salad bar contains two refrigerators. One is a six-door, 20-cu. ft., reach-in box

with four compartments held at temperatures ranging from 35 to 50°F. for pre-baked French pastries, whipped cream goods, and cakes. The other is a five-door dough retarder with a quick freeze compartment in which doughs made up in advance for pastry favorites are always kept.

Elsewhere in the kitchen are five two to six-door reach-in refrigerators for chefs, dessert man, etc., held at varying temperatures according to the meats, fruits, or sauces kept in them.

In the left rear corner, a 10 ft. by 8 ft. meat refrigerator has been constructed. While the main portion of this cooler maintains a 35°F. temperature, two separate sharp freeze compartments in the center operate at -10°F. One of the low temperature compartments is filled with sea foods, such as lobsters, clams, and scallops, while the other stores frozen vegetables which the hotel uses exclusively.

This isolation of sea foods has been found desirable by the hotel because tests proved that sea food odors and flavors tend to migrate, even at sub-zero temperatures, to other foods.

All refrigeration controls and meters are brought together on a single panel.

## What's NEWS in Condensing Units for Refrigerated Fixture Manufacturers?

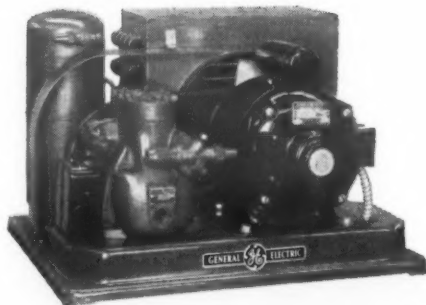
NEW design! New production methods! New benefits to refrigerated fixture manufacturers! You'll find many basic improvements in the new General Electric Type CW condensing units.

These open-type units range from 1/8 to 1 1/2 hp with eight air cooled and four water cooled models. They are so compact that you get much more refrigeration into less space. Low cost, dependable operation make these new General Electric units a big sales plus in any refrigeration fixture.

### G-E Sealed Units, too

Another new G-E line—hermetically sealed units of 1/8 to 1/2 hp—features extreme ease of installation. Easy to handle, light in weight, compact, these sealed units cut your installation costs way down. A special service valve block simplifies connection of refrigeration lines.

Both sealed and open type units offer dependable, conservative ratings. Both offer high volumetric effi-



ciency which means more refrigeration per dollar of power costs. Both have modern forced feed lubrication systems to cut wear, assure longer life.

For details write: General Electric Company, Air Conditioning Department, Section 8706, Bloomfield, New Jersey.

**GENERAL ELECTRIC**  
Better Refrigeration

## "P-H" CASES GIVE YOU MINIMUM SHRINKAGE AND SPOILAGE

50th Anniversary



### PATENTED Grad-U-Matic AIR CONDITIONING GIVES YOU

#### 1. Correct Temperature Control

The modern, scientific design of all P-H cabinets insures minimum spoilage of perishable foods by maintaining correct temperature control within 2° limits.

#### 2. Correct Humidity Control

Special full length coil with large fin area and no-frost feature reduces shrinkage losses to a minimum by maintaining proper relative humidity.

#### 3. Correct Air Circulation

Exclusive air flow regulator provides a mild, gentle upward flow of air that will not dry out or discolor foods. Completely adjustable to climatic conditions.



Write for INFORMATION



**PUFFER-HUBBARD**  
MANUFACTURING COMPANY  
GRAND HAVEN, MICHIGAN EST. 1898  
"The Mark of a Good Case"





To Our

**CUSTOMERS**

**•• SUPPLIERS**

**•• EMPLOYEES**

**MANY THANKS**

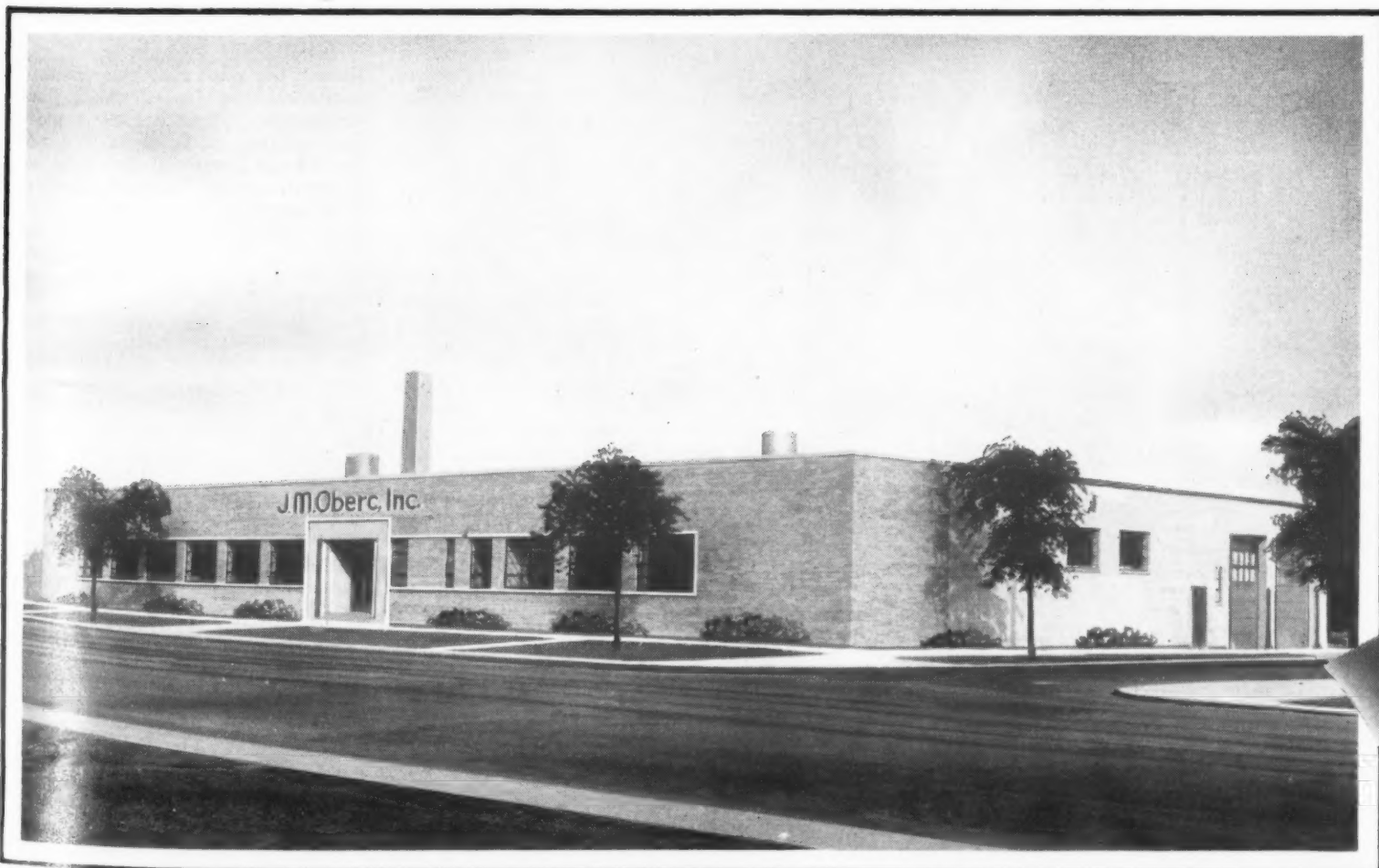
**For Your Response to**

**Our GRAND OPENING**

We of J. M. Oberc, Inc. are grateful to all those who helped make the grand opening of our new office and warehouse, June 19, a far greater success than we had ever hoped for. Our new headquarters were filled all day with our friends... friends who, since our inception 15 years ago, have helped us build the reputation as Michigan's leading jobbing house in refrigeration, air conditioning and heating equipment and supplies.

To these groups: our customers—for their confidence in our firm and products; our suppliers—for their splendid cooperation; our employees—for their faithful service... we extend our sincere appreciation. We feel confident that our new headquarters, the most modern and best equipped in the Middle West, will enable us to strengthen our leadership and better serve the Refrigeration, Air Conditioning and Heating Industry in years to come.

*J. M. Oberc*



**J. M. Oberc, Inc.**

**55 OAKMAN BOULEVARD • HIGHLAND PARK 3, MICHIGAN**

**SERVING 12 GREAT MICHIGAN COUNTIES • • THE AREA  
WITH 60% OF MICHIGAN'S ANNUAL SALES VOLUME**



**MARSH**  
Pressure Gauges  
Dial Thermometers  
★The gauge with the  
Recalibrator  
Ask for this New  
Refrigeration Booklet  
JAS. P. MARSH CORP.  
Dept. O, Skokie, Ill.

**WILSON**  
REFRIGERATION, INC.  
● FARM AND HOME FREEZERS  
● REACH-IN REFRIGERATORS  
● WALK-IN REFRIGERATORS  
● FARM MILK COOLERS  
DIVISION OF WILSON CABINET CO., INC.  
SMYRNA, DELAWARE

**GRUNOW AUTHORIZED  
DEALERS ARE MAKING  
MONEY!**

Build up your new box  
sales now with Grunow  
Service Business!

Write for Authorized  
Service in your territory.

GRUNOW AUTHORIZED SERVICE, INC.  
4313 W. Fullerton Ave., Chicago 39, Ill.

**'Slam-Bang'!**

## Distributor Shuns Cut and Dried Display For Showmanship at Houston Home Show

HOUSTON, Texas—Take a large portion of originality and mix it generously with a salesman's ingenuity. Add plenty of dealer enthusiasm, a sprinkling of management guidance and plenty of hard work. Into this concoction inject a dash of showmanship from a three-ringed circus.

That's the recipe for a sure-fire appliance exhibit, guaranteed to "bring down the house." It did for Cox & Blackburn, Frigidaire's distributor in Houston, during the National Home Show recently.

The entire display was only 70 feet long and 14 feet wide; yet it was estimated that between 15,000 and 20,000 visitors passed through it within the period of a week. Houston dealers participated 100% and the pay-off was fat, rejuvenated, prospect lists for all.

Strange as it may seem, Cox & Blackburn didn't go far to find their idea when they planned the exhibit. Instead they found it close at hand. They built the unique exhibit, which literally "packed 'em in," around the four basic fundamentals of salesmanship—"Attention," "Interest," "Desire" and "Action." As Rolland Storey, sales training and promotion manager of Cox & Blackburn, reasoned, "If we put these basic fundamentals to work for us every day, why not really make them work in a slam-bang display?"

The entire exhibit was comprised

of three sections. An outside side-show attraction was employed as an "attention-getter," complete with a real-life quartet, music and plenty of action. Inside were model kitchens and laundry room settings, completely equipped with Frigidaire household equipment. In the Frigidaire appliance "garden" in the rear, enclosed with ivy-covered lattice-work, were complete lines of appliances for demonstration.

Outside, the length of the exhibit was a selling-station type display of appliances to take care of the crowd overflow. Special emphasis was placed on "traffic." Plenty of salesmen were spotted in key positions to keep the flow of traffic moving and to demonstrate the equipment to visitors.

The exhibit routine went something like this: A nattily-attired, white-coated, male quartet on an elevated stage, complete with microphone, gave voice to a popular number. This attracted the "attention" and brought in the crowd. Without delay, the quartet would swing out with the singing version of "Milestones of Progress," a musical version of the history of home laundry through the ages. Then huge blow-up pictures, representing washing methods from early cave-man days to modern times, were presented alongside the quartet. As each verse was finished, a new picture was highlighted, bringing the message to

## Attention--



The quartet, pictures, and smoke pot drew the crowds to the Frigidaire exhibit, sponsored by Cox & Blackburn, Frigidaire distributor in Houston.

## Desire--



Plainly seen is the "desire" created by the model kitchen display. A mirror partition was used between the model kitchen and laundry room setting to lend an air of expansiveness.

the audience by sight as well as by ear.

The finale of the four-minute show was a presentation of Frigidaire's new automatic clothes washer—which in the words of the MC, "Was the Wonder Washer of all Times." Pooph! A smoke-pot was blown off and when the smoke cleared, the washer was seen slowly rising up out of a hidden trap-door in the floor of the stage. In the meantime a brightly-spangled background was exposed and two hidden bubble machines made a picturesque halo of iridescent bubbles around the washer. As it reached its zenith, the lid opened and by means of a cleverly designed mirror arrangement, the audience could see the pulsator operating. The quartet wound up the presentation by singing a version of Frigidaire's advertising slogan, "You're Twice As Sure With Two Great Names—".

Without further ado, the crowd was hustled off through the entrance of the exhibit with simple prompting statement of "step inside and get your free gift from Frigidaire (a fingernail file) and see the sights."

To "interest" the visitors in the products, a model kitchen setting, complete with Frigidaire refrigerator, range, kitchen cabinets and sink, was on display. A typical laundry room setting, with Frigidaire auto-

matic washer, dryer and electric ironer, adjoined the kitchen. Both sections were roped off in order to eliminate confusion in the flow of traffic. Two salesmen, located at strategic points, kept the flow of visitors moving into the Frigidaire garden where the entire array of appliances and plenty of salesmen from the various dealerships awaited to demonstrate them.

Here, in the "garden of appliances," the remaining two basic fundamentals of salesmanship were exemplified. Demonstrations and actual handling of products by visitors created the "desire." Salesmen were on hand to take "action." The names of prospective customers were jotted down in notebooks. Later these lists were correlated and distributed in accordance with participating dealers' territories.

A pleasing color scheme enhanced the physical appearance of the exhibit. For example, the kitchen setting was basically a cool green with a two-color linoleum of yellow and red. The egg-crate ceiling was done in sunlight yellow and the lattice in the garden was of the same decor. A Chinese grille effect in the laundry setting was Chinese red and the chair upholstery was of chartreuse leatherette, trimmed in red. Wallpaper around the grille and back of the ironer was dark green and red.

## Interest & Action--



Interest and action were present here, because during the exhibition salesmen from the various dealerships served by Cox & Blackburn were on duty to wait on the customers in this ivy covered garden.

*A Brief for  
FREE  
COMPETITIVE  
BUSINESS*

TECUMSEH PRODUCTS COMPANY  
Tecumseh, Michigan

*Yours for the Asking...*

Due to the great number of requests received for reprints of our recent series of advertisements, the entire group has been assembled and printed in booklet form. There are 27 ads to the series, each one dealing briefly with a single aspect of America's free competitive economy as illustrated by the growth and development of Tecumseh Products Company. A copy was printed for you... it's yours for the asking.



**TECUMSEH PRODUCTS COMPANY**

Tecumseh, Michigan

World's largest  
independent producer  
of Compressors and  
Condensing Units



## Survey Shows First 500 Mechanically Cooled Candy Vendors Installed

CHICAGO—The first 500 refrigerated candy vendors put on the market by United States Vending Corp. are now in use in a variety of locations ranging from city parks and beaches to office buildings and factories the firm said a survey revealed.

Present locations include, for example, Columbia university, New York City; Alden Theater, Philadelphia; United States Steel, Duluth; Bell Telephone Co., Ft. Wayne, Ind.; Headquarters, Second Air Force, Offutt Field, Nebraska; Tempe Beach, Phoenix, Ariz.; city parks in San Francisco; and the General Motors plant in Buffalo, N. Y.

Among other locations are San Antonio Bus Co., San Antonio, Texas; Le Tourneau Co., Vicksburg, Miss.; Walton office building, Atlanta, Ga.; Headquarters, United Auto Workers (CIO), Detroit; University of Minnesota, St. Paul; U. S. Rubber Co., Eau Claire, Wis.; National Laundry, Memphis; and Springs Cotton Mills, Lancaster, S. C.

Still other sites are University of Ohio, Columbus; American Airlines, Tulsa, Okla.; Carters Ink, Boston, Mass.; Carter Carburetor Co., St. Louis; Woolf Brothers Department Store, Kansas City; and DeForest Television School, Chicago.

Coast-to-coast experience with the vendor "has confirmed the predictions of operators and candy manufacturers that refrigeration plus sufficient capacity would sell more candy to the same group of people." U. S. Vending claims its machine is "the only refrigerated candy vendor on the market today."

## Standell To Distribute United Condensing Unit Line In East

CHICAGO—United Motor Industries Corp. has appointed Standell Co., Inc., 570 North Broad Street, Elizabeth, N. J., as exclusive Eastern distributor of the United line of condensing units.

Officers of the new organization are J. J. Moss, president; L. Y. Chan, vice president, and Franklyn Steinberg, treasurer.

## Dairy Group Lines Up Hotels for Fall Meeting

WASHINGTON, D. C.—More than 8,000 hotel rooms will be available for visitors to the annual dairy conventions and the 16th unlimited Dairy Industries Exposition to be held in Atlantic City during the last week in October, according to the Dairy Industries Supply Association, exposition sponsor.

Eight of the principal hotels are pledged to capacity to either the Milk Industry Foundation or the International Association of Ice Cream Manufacturers, whose conventions will be the major events of the week, DISA said. The latter group meets Oct. 25-27 and the former on the following three days.

The rate of reservations in the pool of all other hotels indicates a record turnout, it was reported. Three of the larger pool hotels—the Ritz-Carlton, the Marlborough, and the Claridge—are said to be entirely booked for the show week.

Anyone closely identifiable with

the dairy industries may obtain reservations without use of a special form by writing to Atlantic City Housing Bureau, 16 Central Pier, Atlantic City, N. J., DISA said.

Requests for reservations should specify the hotel choice or choices, type of accommodation required (single, double, etc.), approximate rate, and approximate date and hour of arrival and date of departure.

Most visitors to the Dairy Industries Exposition will not be charged an admission fee. DISA said the following will be admitted free:

All dairy processors; milk inspectors and health officials; other federal, state, and local government personnel having a valid interest; dairy educators and their students; and equipment and supply jobbers or distributors invited at the request of exhibitors.

Varying but standard fees will be charged supply and equipment jobbers not invited by exhibitors and non-exhibiting supply and equipment manufacturers.

Those uncertain as to their eligibility are invited to communicate with DISA, Albee Building, Washington 5, D. C.

## 3 Appointments and Enlargement of Retailer Services Mark Expansion of Silver-Stahl Corp.

SAN FRANCISCO—Accomplishment of five objectives in the expansion program now under way at the Silver-Stahl Corp. here has been announced by Nat Silverstone, president of the commercial refrigeration distributorship.

These accomplishments are:

1. Opening of a new sales and showroom for the firm's enlarged retail organization at 298 Seventh St. at Folsom St. Ample office space and classrooms for sales training purposes are provided here.

2. Appointment of E. Van Fleet to head the retail organization, which covers the San Francisco metropolitan area. Van Fleet was formerly with the Super-Cold Corp. for 10 years.

3. Appointment of William Stafford as wholesale sales manager for the firm's entire outside territory. Stafford also has charge of the company's dealer organization.

4. Appointment of the East Bay

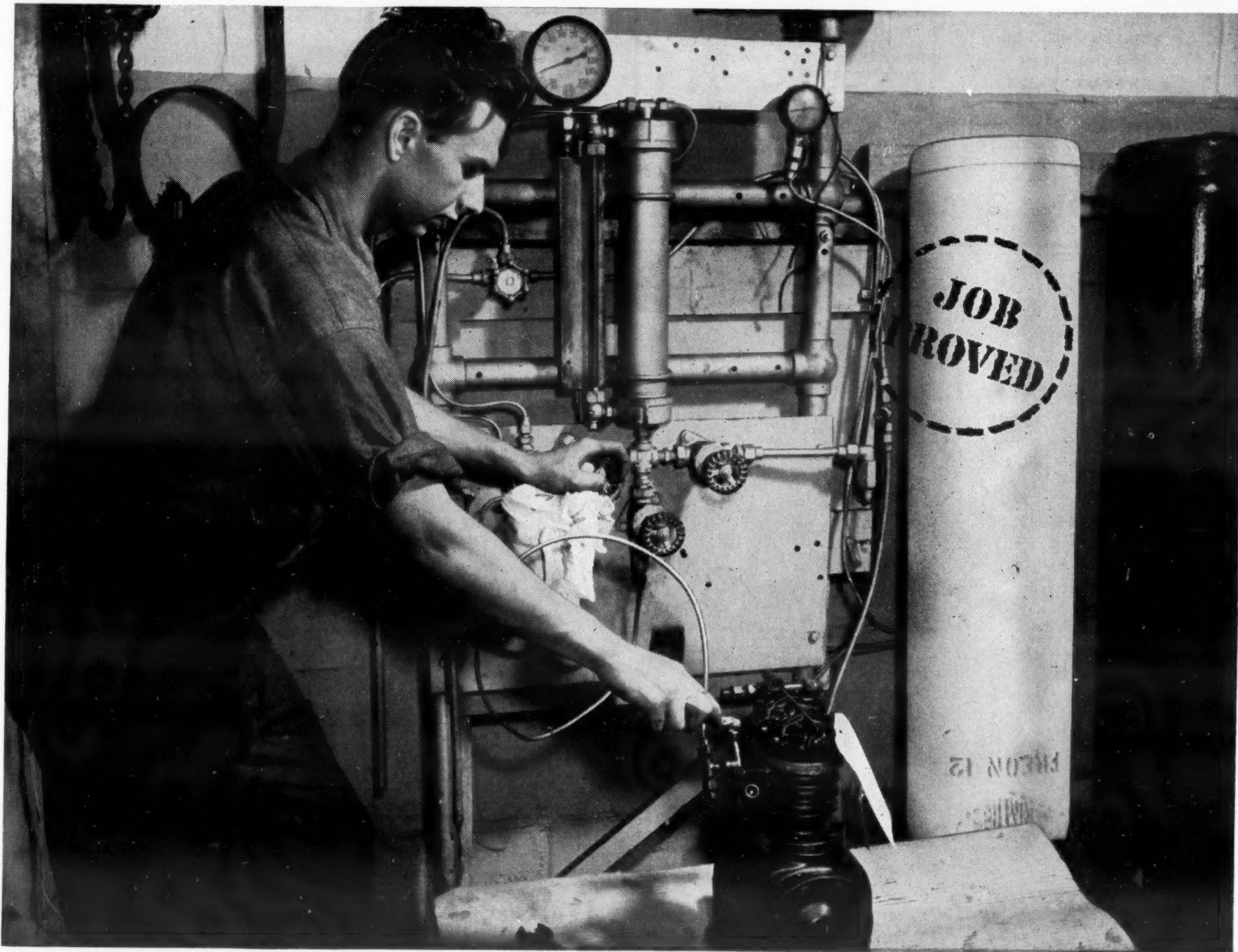
Refrigerator & Fixture Co. as exclusive area distributor for the Super-Cold line in the Oakland area and the East Bay territory. The East Bay firm, headed by Al Liabe, recently opened new showrooms at 2555 Grove St., Oakland. It maintains plant and offices at 941 Aileen St., Oakland.

5. Operation of a retail concession in the San Francisco store of R. H. Macy & Co. for the new Selb 4-cu. ft. apartment house refrigerator.

Silver-Stahl Corp. is exclusive zone distributor in northern California for the Super-Cold Corp. It also distributes Selb display cases and apartment house refrigerators, ice cream cabinets, and soda fountains for the C. Nelson Mfg. Co. of St. Louis, and products of Drincolor Corp. of New York.

Everett H. Stahl is treasurer of the corporation.

Main offices and warehouse for the firm are located at 219 Natoma St.



## NOTHING BUT THE BEST

### Suniso Refrigeration Oils Are The First Choice of Reliable Refrigerator-Service Men

Good products are the keystone of business success. When you use Suniso Refrigeration Oils, you can be confident that you are using the very best that can be obtained.

Suniso Oils come in six different grades. They are characterized by unusually low pour-points, by high

dielectric strength (over 25,000 volts), by purity and high stability. They withstand chemical change when mixed with Freon or other modern refrigerants.

Suniso Refrigeration Oils are specially refined for the refrigeration and air-conditioning industry.

They are first choice with the manufacturers of such equipment. In fact, this industry probably uses more of Suniso Refrigeration Oils than the total of all other brands.

For handy tool-box card showing correct Suniso grades for different types of systems, write Dept. RN6.

SUN OIL COMPANY • Philadelphia 3, Pa.  
In Canada: Sun Oil Company, Ltd.  
Toronto and Montreal

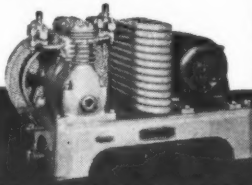
## SUN PETROLEUM PRODUCTS

"JOB PROVED" IN INDUSTRY



**Lipman**  
AUTOMATIC REFRIGERATION

For year-in and year-out DEPENDABILITY, LIPMAN refrigeration is second to none. Low cost of operation and maintenance assures repeat sales which mean greater profits. Units available in sizes from 1/4 thru 40 H.P.



GENERAL REFRIGERATION

DIVISION  
YATES-AMERICAN MACHINE CO., Beloit, Wisconsin

insist on  
genuine

**Marlo**

products

MARLO-HEAT TRANSFER  
Since 1925

GET GENUINE  
**WAGNER**  
Bearings



Wagner Bimetal sleeve bearings resist seizure, last indefinitely when properly lubricated. They come to you diamond bored to specified size; simply press in according to instructions, and reassemble motor. They are also available unbored for undersize shafts. Get them now from your Wagner distributor. Name on request.

Wagner Electric Corporation

ESTABLISHED 1911  
8471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.  
ELECTRICAL AND AUTOMOTIVE PRODUCTS



**DISTRIBUTORS WANTED!**

AMERICA'S GREATEST BEVERAGE COOLER

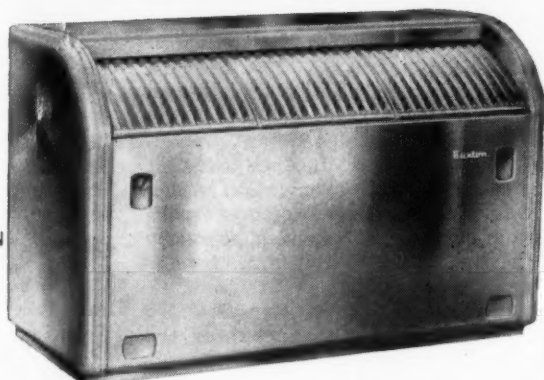
**BUXTON CHILL-AIRE**

ALL-STAINLESS DURAL MATERIAL INSIDE AND OUT

A Type of Aluminum So Highly Polished One Thinks Immediately of Sterling Silver

**FOR IMMEDIATE DELIVERY****Features  
That Really Sell**

- **ALL-STAINLESS DURAL**  
Inside and out
- **GLASS INSULATION**  
Cannot settle; vermin proof
- **IT'S DRY**  
No messy water or ice
- **OVERSIZE COOLING UNIT**  
For rush hours
- **ADJUSTABLE DIVIDERS**  
For any size bottles
- **UTILITY SHELVES**  
Pre-cool glasses, juices
- **EXTRA CAPACITY**  
A 5 ft. holds 21 cases (12 oz.)  
An 8 ft. holds 35 cases (12 oz.)
- **CURVED DOORS**  
They close automatically

**TWO SIZES**  
8-Foot and 5-Foot**WRITE OR PHONE TODAY**

For complete details—descriptive literature, price lists, territories available write or phone E. George Sanders, General Sales Mgr. at 3120 N. Main St., Dayton, Ohio. (Temporary nat'l sales office.) Phone Randolph 2147.

**BUXTON, INC.** 1900 E. 48TH ST.  
LOS ANGELES 11, CALIF.

## Memphis Dealer Finds Step-by-Step Economy The Only Key to Profit In Handling Trade-Ins

Photo at right is a partial view of Lowenstein's second-floor repair shop where the firm's crew of mechanics is able to handle a



steady volume of trade-in refrigerators for reconditioning. Each unit is completely torn down and overhauled.

MEMPHIS, Tenn.—A system of handling appliance trade-ins without losing money—tested successfully over a year's time—has been developed by Lowenstein's Home Service, Inc. here.

Lowenstein's, which is located in a four-story building remodeled from a garage, carries 16 nationally advertised lines of major appliances and accepts trade-ins on nearly all of them, according to F. T. Goodwin, general manager.

"We recognized the inevitability of having to handle trade-ins when we opened the store a year ago," Goodwin said. "And that in order to

handle them equitably, it would be necessary to economize on each step in the process—from making allowances to the final resale."

Lowenstein's has trained three veteran outside specialty salesmen thoroughly in the art of recognizing resale value of trade-in boxes.

"Now, we have complete confidence in the ability of each man to make allowances," Goodwin said. "And in fact, we back up every man all the way. He is entitled to make as liberal an allowance as he feels possible to ultimately break even on the used refrigerator, thus keeping the limited profit spread on the new box clear."

"Each of our salesmen has had a lot of experience, covers the entire city, and his ability to figure allowances correctly does away with the expense of sending an estimator out to do the job."

When an allowance has been made—and it may range anywhere from \$25 to \$75—Lowenstein's economizes by picking up the old box at the same time the new one is delivered. The trade-in refrigerator goes im-

mediately to the huge service shop in the rear of Lowenstein's second floor, where seven specialty repair shops, each with its own crew of mechanics are located.

All refrigerators are torn down completely, condensing units overhauled, new hardware, shelving, etc., installed. They are placed on a test line for a period of 36 hours, given a thorough check, and then guaranteed for three months.

At the rear of the service shop, the store has constructed an over-sized paint-spray booth, which has the last word in electrically-operated disc type sanders, edgers, and polishing buffers.

The paint shop is not operated until a sufficient accumulation is on hand to keep it busy during the day. Then all boxes are sanded down, rough metal refinished, thoroughly masked, and sprayed with two coats of fine synthetic enamel, which is air-dried to a glittering, like-new finish.

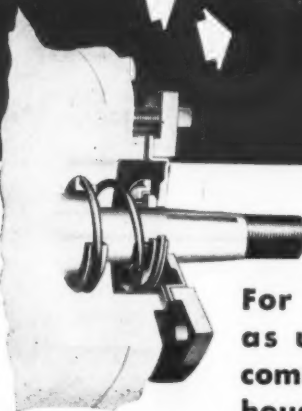
As soon as painted, the trade-ins move immediately to an open space

(Concluded on next page)

**Section Where Appliances Are Repaired**

One of seven specialty repair sections operated as part of Lowenstein's over-all trade-in handling program.

## ROTARY SEAL REPLACEMENT UNITS POINT THE WAY TO 'SEALING WITH CERTAINTY'



UNIT No. 14222

For refrigeration compressors as used in commercial, semi-commercial, air conditioning and household installations.

ROTARY SEALS are available for over 848 models. See our stock list.

**SEE YOUR JOBBER!**

2020 NORTH LARRABEE STREET • CHICAGO 14, ILLINOIS, U.S.A.  
CANADIAN AGENT: 2025 ADDINGTON AVENUE • MONTREAL, QUEBEC, CANADA

Now you can beat the heat  
... thanks to the Appliance Industry

Air conditioners are but *one* of the modern American appliances that makes life today so much easier, more comfortable and more healthful for millions of people. The record of the entire appliance industry *must* be a matter of pride to *all* its members. A pioneer in the development of appliance motors, Delco Products is more than glad to be associated with this great American industry. Today's Delco Motors, built in sizes from  $\frac{1}{8}$  to 50 h.p., are finer than ever—quiet, compact and dependable, and designed to meet the requirements of the particular application. Delco Products Division, General Motors Corporation, Dayton, Ohio.



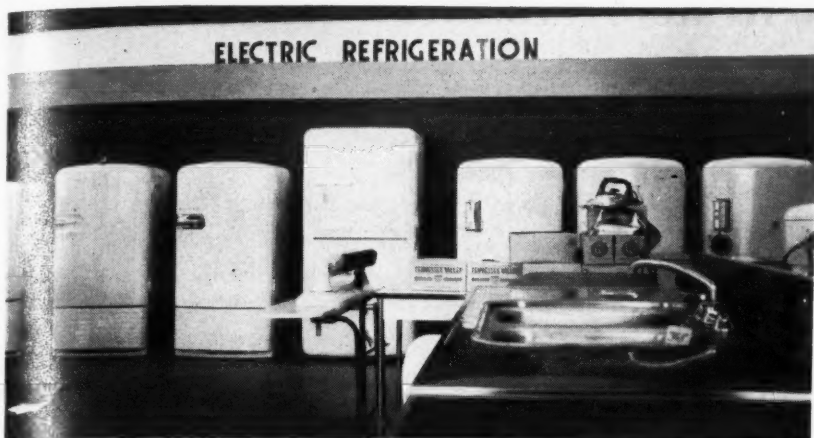
SALES OFFICES: CHICAGO • CINCINNATI  
CLEVELAND • DETROIT • HARTFORD, CONN.



**Delco Motors**  
power America's Leading Appliances



## Lowenstein's Sells New Models Separately



This is part of the major appliance display room at Lowenstein's. Trade-ins are sold on a floor separate from new models.

## Memphis Trade-In Shop--

(Concluded from preceding page)  
set aside for trade-in selling on the second floor. When limited-income customers, or those who demonstrate a desire to buy a lower-priced used model come in, they are directed from the main floor to the "Trade-In Shop."

While it might be possible to extract a small profit continuously, Lowenstein's has been content to "break even," according to W. E. Bruce, service manager. Bruce has the last word on the handling of any trade-ins.

"Carrying the boxes separately away from the new merchandise has a lot of advantages," Bruce said.

"There is no disparaging comparison, and the customer invariably has from 10 to 12 models to choose from."

Lowenstein's cheerfully accepts trades on boxes much older than most Memphis dealers care to consider—many of which are "cannibalized" or simply scrapped. The same is true of washing machines, ranges, and other white goods. All are meticulously reconditioned, refinished, and sold through the trade-in store.

In addition to its staff of shop-

men, Lowenstein's has 16 refrigeration service mechanics, operating eight trucks, who maintain warranties through funds set aside at the time of sale of every appliance, and are available at \$2.50 an hour, plus materials, for general outside work.

## Carrier Corp. Expands Marine Service Dept.

NEW YORK CITY—Sharply increased business in recent months has necessitated the expansion of the Service Department of the Carrier Corp. Marine Department.

Located in its new headquarters at 3232 Greenpoint Ave., Long Island City, Carrier Marine Service has twice as much floor space in its new location.

From this new headquarters, the Marine Department directs its service activities in the principal ports of the U. S. It provides 24-hour service for ships which put into New York Harbor and supplies spare parts for rapid shipment to representatives in any major port in the world. A staff of 25 specialists under George R. Numrich, Marine Service and Construction Manager, is now required to handle headquarters activity.

The department maintains a stock of more than 5,000 different parts to insure prompt delivery, states N. F.

Cuneo, Marine Service sales supervisor.

Business originates from the more than 10,000 ships of all types and tonnages which have been equipped with Carrier marine refrigeration and air conditioning systems.

## Blind Woman Earns Living With Automatic Washer

OMAHA, Neb.—Mrs. Vivian Cottey, blind almost since birth, earns her living by doing neighbors' washing and ironing. The secret of her success in this unusual occupation is automatic laundering equipment. She has a Bendix automatic washer, dryer, and ironer.

State assistance department officials believe she is the only sightless person in the country earning her living that way. Harry L. Hines, director of the blind program, says she takes in about \$25 a week.

An acute sense of touch enables Mrs. Cottey to set the automatic washer and dryer and to operate the ironer.

## Webb Named Electrimatic Agent In Southern States

CHICAGO—Electrimatic Division of the Simoniz Co. has named Clyde L. Webb as sales representative for the states of Texas, Mississippi and Louisiana.

For the last two years Mr. Webb has been Surplus Property Officer in the Refrigeration Equipment Sales Division of the War Assets Administration. During the war it is reported that he served with the Refrigeration and Air Conditioning Branch of the U. S. War Production Board with headquarters in Washington, D. C.

For three years prior to the war, Mr. Webb was manager of the Farr-Webb Co. in Houston, Texas, which was a commercial refrigeration and air conditioning co-partner dealership. For a 10-year period he was associated with the Kelvinator Division of the Nash-Kelvinator Corp., where he served both in the capacity of commercial sales engineer as well as field service supervisor, the company reports.

## NEW KINETIC PLANT

Increases "FREON" Production 60 Per Cent!

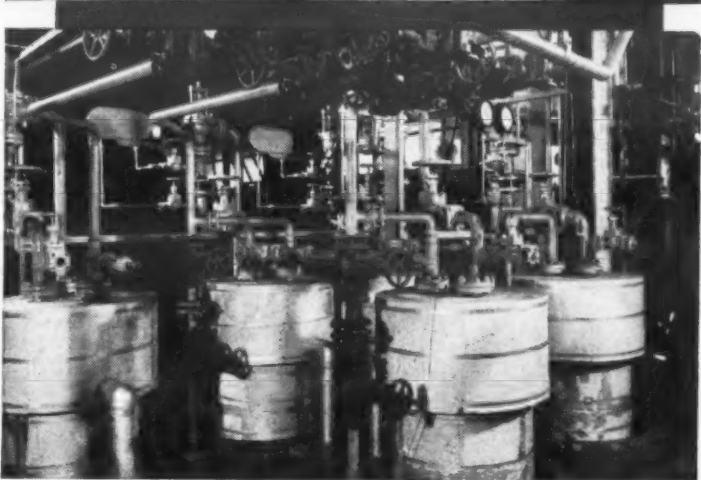
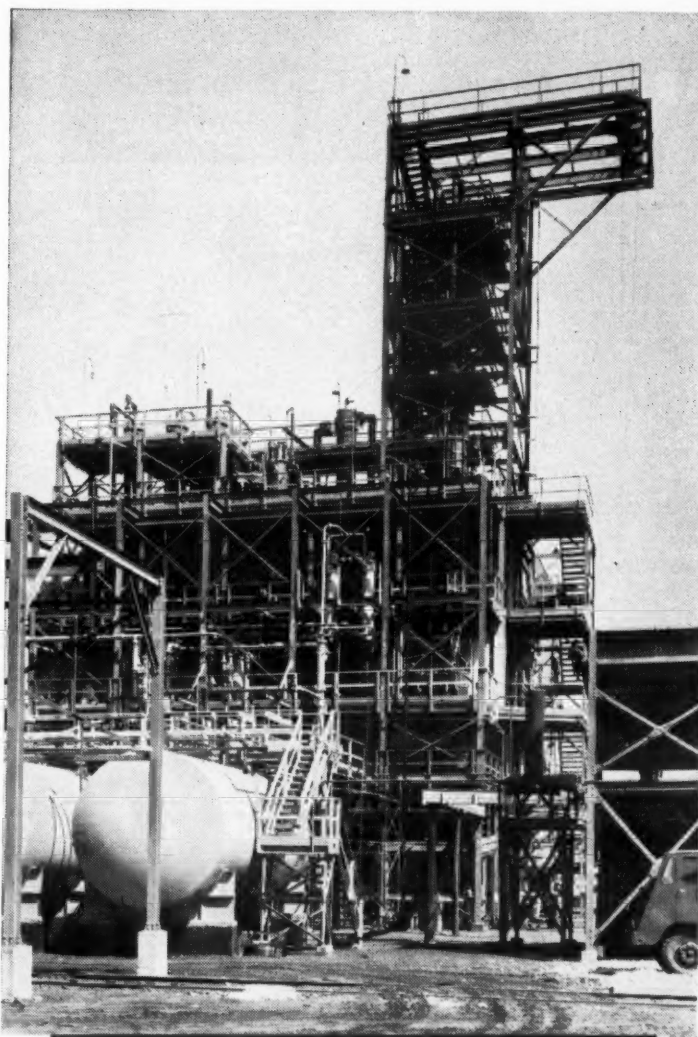
General view of the new and thoroughly modern "Freon" plant (top photo). Recently completed . . . it is in operation at East Chicago, Indiana. The structure houses the many highly specialized installations required to produce "Freon" safe refrigerants and propellants.

The new plant increases total production of "Freon" approximately 60 per cent. This will make available enough "Freon" to meet steadily growing demands and eliminates any necessity for stock piling by users. Center photo shows a few of the instrument panels which give minute-by-minute control of the precision "Freon" syntheses.

The maze of pipes, valves, tanks and gauges seen in the lower photo is typical of equipment used in making "Freon." Great technical skill and engineering "know how" in production . . . in addition to painstaking laboratory control . . . insure the uniform quality of "Freon."

This constant high quality contributes to the long life and satisfactory performance of equipment designed to utilize these superior products. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.

Empty cylinders in which to ship "Freon" are still urgently needed. Please return empties promptly.



for draft and bottle beverage coolers...

IDEAL Speed-Freeze PRODUCTS

IDEAL COOLER CORPORATION  
2953 EASTON AVE., ST. LOUIS 6, MO.

COOL PROFITS IN AIR CONDITIONING WITH TYPHOON SELF-CONTAINED UNITS



Compact, fully automatic, marvels of efficiency in sizes up to 10 tons.

TYPHOON AIR CONDITIONING CO., INC.  
Division of Ice Air Conditioning Co., Inc.  
794 UNION STREET • BROOKLYN, N. Y.

THOMAS TRUCK of Keokuk PRY TRUCKS

Freight too big or too heavy for regular 2-wheel trucks can be handled easily with Thomas Pry Trucks, particularly when used in pairs. Sharp steel slides under load, tremendous leverage enables user to easily raise load as high as 9" from floor. Used by freight handlers on R.R. tracks, docks and in mfg. plants. One of many Thomas 2 and 4 wheel trucks. Ask for bulletin P.T.

THOMAS TRUCK & CASTER CO.  
4341 Mississippi River, Keokuk, Ia.





**MODEL 4800**  
Open-type, self-service refrigerator illustrated has controlled moisture and circulation. Spacious storage compartment is also fluorescent-lighted. Slanting mirror offers long-range display value. Tandem arrangement of two or more makes outstanding line-up.

The rapidly growing number of Warren installations has placed a high value on the Warren franchise.

Our exacting standards of manufacture and the type of representation we prescribe require the highest type of dealer.

We invite your inquiry for complete details. Address Dept. 202.



**The WARREN COMPANY** INCORPORATED  
905 MEMORIAL DRIVE, S. E. ATLANTA 1, GEORGIA

## Mfr., Dealers Sponsor Wilson Freezer Contest

SMYRNA, Del.—A two-way sales and prospect building plan is being conducted nationally by dealers of Wilson Refrigeration, Inc., to stimulate interest in family freezers.

During the campaign period the FF-15 model, a 15-cubic foot freezer, has been stressed. The FF-15 is being emphasized in the dealer sales campaign, because, in a recent survey by dealers and distributors, it was found that this model is the most popular sized model in the Wilson line.

One phase of the retail promotion provides for consumer participation in a dealer conducted local contest in which a Zerosafe family freezer, FF-15, is given away by the dealer. The alternate plan provides for additional advertising and promotion which is to be used specifically on the FF-15 model.

The company is supporting the dealer contest by furnishing dealers with a promotion kit containing contest entry blanks, four newspaper advertisement mats for local use, copy on spot radio announcements, suggestions for window display cards and other displays.

## Sanger Gets Dallas Dealership

DALLAS, Tex.—The Ellis & Bobbitt Store at 8211 Preston Road, dealing principally in the Carrier room air conditioner, is now operated by the firm of Sanger Brothers. The latter firm used a large display advertisement in local newspapers to announce the change in ownership.

## Refrigerated Candy Case Aids Druggist To Restore Summer Chocolate Volume



Patrons select from glass display section, are served from lower candy storage drawers.

LAMAR, Tenn.—Boxed chocolate sales have increased substantially since the Robert E. Beloe Pharmacy here installed a new refrigerated candy display case accommodating up to 250 lbs. of chocolates.

Like many other drugstores, the Beloe store formerly had to give up handling chocolate and chocolate-covered candy altogether during the hot summer months. So, realizing that a profitable volume was being lost, Beloe turned to refrigeration.

He ordered his first refrigerated case some three years ago. Now, after experimenting with several types, he has arrived at what he believes is the ideal kind.

This is a buff-finished unit which displays 36 boxes in a shallow, glassed-in area at the top. This section is kept at a steady 30° by a small coil-and-blower circulating unit.

Below the display compartment are four pull-out drawers, each heavily insulated, which contain replacement stocks. They, too, are kept refrigerated at 30°.

For selling efficiency, the customer selects the box of candy desired from the upper display but receives actual delivery from one of the drawers.

Beloe described the refrigerated case as "our greatest merchandising asset."

## New Interpretation

### Wage-Hour Administrator Explains Effect of Supreme Court Ruling on Overtime Pay Practices

WASHINGTON, D. C.—Employers who have in the past paid time and one-half compensation for work because performed on Saturdays, Sundays, or holidays or at hours actually "outside the normal or regular working hours" and have treated the extra pay as an overtime premium in good faith reliance on the interpretations of the Wage and Hour Division are in most cases protected by the Portal-to-Portal Act from any resulting back-wage liabilities, declared Wm. R. McComb, Administrator of the Wage and Hour and Public Contracts Divisions, U. S. Department of Labor, in a statement on the effects of the Supreme Court decision in *Bay Ridge Operating Co. v. Aaron and Huron Stevedoring Co. v. Blue*.

McComb added, however, that under the Supreme Court decision, employers could no longer follow the Administrator's interpretations (expressed in paragraphs 69 and 70 of Interpretative Bulletin No. 4 and elsewhere) insofar as such extra payments are made because of undesirable work hours rather than because the hours are in excess of a specified standard.

For the future, therefore, some employers will have to make necessary adjustments in their overtime pay practices in order to come within the scope of the Supreme Court opinion. The opinions expressed in paragraphs 69 and 70 of Interpretative Bulletin No. 4 are now withdrawn, McComb emphasized, insofar as they relate to this type of extra payment.

In order to give affected employers a reasonable opportunity to make any necessary changes in their practices, McComb said, the Divi-

sions will begin enforcement on the revised basis as of July 1, 1948.

"The essence of the Supreme Court ruling," said McComb, "is that an employee who receives a higher wage rate because of undesirable hours or disagreeable work is entitled to be paid for work beyond 40 hours in a workweek at time and one-half figured on his actual pay, but that extra pay received for working long hours is not a part of the regular rate and can be credited against the overtime pay required by the Wage and Hour Law."

It was also pointed out by McComb that under the Supreme Court's decision extra pay by contract or statute for hours worked in any day or week in excess of a bona fide standard is not part of the base wages on which overtime must be computed under the Fair Labor Standards Act, and can be credited toward the extra compensation required by the Act for work beyond 40 hours in a workweek.

This may be illustrated by collective bargaining agreements calling for bona fide overtime pay at time and one-half for work after 7 hours a day or 35 hours a week. The Supreme Court's opinion explicitly approved this interpretation which has been the Divisions' opinion.

In consequence, McComb added, the fears which were expressed in some quarters, after the Circuit Court's opinion, that such overtime payments could not be offset against the requirements of the Act, have proven to be unfounded.

McComb advised both labor and management operating under the law to review their own overtime pay practices in the light of the Supreme Court's opinion.

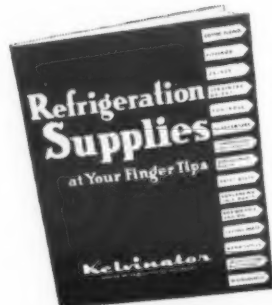
# That's Right!

Kelvinator parts are priced right . . .  
always right for the job!

You're right from every angle—when you buy dependable refrigeration parts . . . from Kelvinator!

Each item is *quality-built* for peak performance—*competitively priced* to fit right into your sales picture. And you can choose from a *complete stock* of the finest refrigeration parts at any of the 50 Kelvinator depots.

For fast, friendly, Kelvinator service . . . mail or phone in your order . . . or stop by in person . . . Kelvinator, Division of Nash-Kelvinator Corporation, Detroit, Michigan.



**GET YOUR COPY!** Here's a new catalogue for the *quick, easy* way to buy refrigeration parts and supplies. All information and prices are grouped for easy reference. Ask for it at your local Kelvinator Distributor's or Zone Office.

# Kelvinator

CONDENSING UNITS  
REFRIGERATION PARTS AND  
SUPPLIES



BUY KELVINATOR FOR ALL YOUR REFRIGERATION REQUIREMENTS

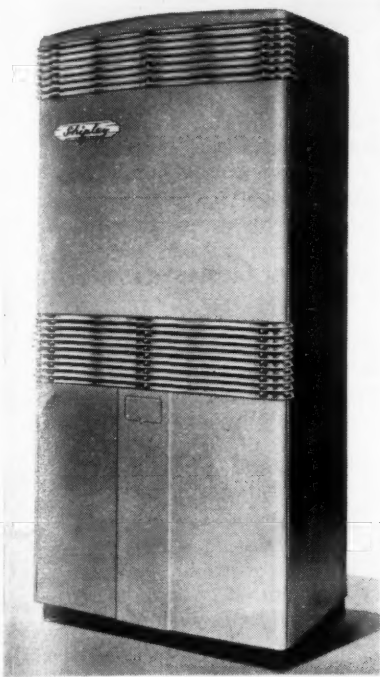
*Wall* WIRE  
PRODUCTS COMPANY  
PLYMOUTH • MICHIGAN

Makers of  
REFRIGERATOR SHELVES • STAMPINGS  
FORMED AND WELDED PRODUCTS

Stainless Steel  
Refrigerator Shelves  
give the final  
touch to a  
quality cabinet.



### Shipley Conditioner



### York-Shipley Distributes Line of Packaged Units

YORK, Pa.—Distribution of three sizes of packaged air conditioners under the trade name of Shipley air conditioners has been started by York-Shipley, Inc., manufacturer of York-Heat automatic heating equipment.

The Shipley line is available in 3, 5, and 7½-hp. sizes and will be distributed through York-Shipley's network of distributors and dealers throughout the country.

A two-stage hermetically sealed compressor powers the Shipley air conditioner. It may be installed with three plumbing connections and one electrical connection. Units range in weight from 884 to 950 pounds. All are enclosed in the same size cabinet which is finished in green.

Key specifications of the Shipley air conditioners, as released by the company, follow:

	SAC-300	SAC-500	SAC-750
<b>Cabinet Dimensions:</b>			
Height	85	85	85
Width	39½	39½	39½
Depth	24½	24½	24½
<b>Plenum Chamber</b>			
Outlet Size (Duct Opening)	16½ x 33	16½ x 33	16½ x 33
Return Air Connection Size (Intake Grille)	9½ x 35	9½ x 35	9½ x 35
<b>Blower Data:</b>			
Width	13	13	13
Diameter	12	12	12
R.P.M. (at Std. Duct Static Pressure)	500	650	725
C.F.M.	1,500	2,000	2,250
<b>Blower Motor:</b>			
H.P.	¼	½	¾
<b>Compressor Data:</b>			
H.P.	3	5	7½
R.P.M.	1,728	1,728	1,728
Low Compr.	2	2	2
Stroke	2½	2½	2½
High Compr.	2	2	2
Stroke	1¾	1¾	1¾
<b>Filters (Metal-Cleanable)</b>			
Number	1	1	1
Inlet Area	3.1 sq. ft.	4.2 sq. ft.	6.3 sq. ft.
Size	15 x 30¾	19½ x 30¾	21½ x 33½
<b>Evaporator Coil</b>			
Area	3.07 sq. ft.	4.2 sq. ft.	4.75 sq. ft.
Size	14½ x 31	19½ x 31	20½ x 33½
Rows	4	4	6
Face Velocity at Coil	490	475	475
Amount of Freon Charge	12 lbs.	14 lbs.	18 lbs.
Amount of Oil Charge	1 gal.	1 gal.	1 gal.
Water Consumption GPM	3.04	4.90	6.90
BTU—Hourly Capacity	36,000	60,000	80,000

### Locker Plant Offers To Select Food for Patrons

SYRACUSE, N. Y.—Igloo Food Lockers, Inc. is successfully promoting the sale of frozen foods and the rental of food lockers with newspaper advertising that urges customers to order a supply of fruits and vegetables for the coming 12 months.

"As they come in season," advertising copy says, "Igloo will select the finest quality foods for freezing and store them in your locker. Igloo food lockers will freeze produce from your own garden."

"An Igloo food locker plus a frozen food cabinet at home will enable you to plan a food program that includes out of season treats your family enjoys."

### No Soda Fountain, Drugstore Stocks Reach-In With Cool Drinks for Customer Self-Service

RENO, Nev.—A refrigerator from which customers help themselves for properly chilled mixers, soft drinks, canned and bottled beer, has been a sales builder for Hale's Drugstore at 2nd and Center Aves. here.

William Locke, owner of the store, hit upon this idea when he noticed that the store, which has no soda fountain, was frequently forced to disappoint people who came in looking for a cold drink during hot weather, or for mixers for use in serving drinks in their homes.

The beverage refrigerator is placed in the right-rear corner of the store, where it accommodates approximately four cases of assorted cold

beer, Coca Cola, ginger ale, sparkling water, Dr. Pepper, and other bottled beverages. Stacks of additional bottled beverages are kept at the side of the refrigerator in 6-bottle "take home" packages as well as in wooden cases.

A sign across the top of the refrigerator invites customers to "Help yourself and pay the cashier" who is located only a few feet away.

The refrigerator has proven a "natural" for calling women's attention to the well-stocked infants' food department on the rear wall, and to nearby drug departments. Pharmacists on duty regularly point it out to prescription customers.

### Restofski Named Head of EEI Commercial Committee

PITTSBURGH—Harry Restofski, sales promotion manager of the West Penn Power Co. here, has been appointed chairman of the Commercial Division General Committee of the Edison Electric Institute.

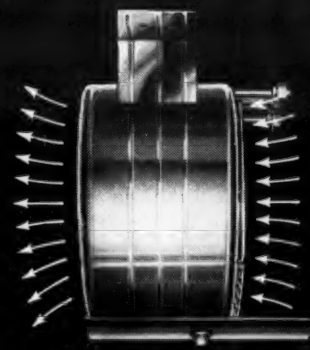
Restofski will direct the activities of 19 EEI commercial committees, operating in the residential, commercial, industrial, and rural fields and covering all types of electrical appliances and uses. His responsibilities will include the supervision of the national promotional activities sponsored by the Institute, such as the Planned Lighting Program, and EEI's new campaign on all-electric kitchens.

# NEW UNIT COOLER

## ONE OF THE BIG THREE OF 1948



BACK VIEW



SIDE VIEW

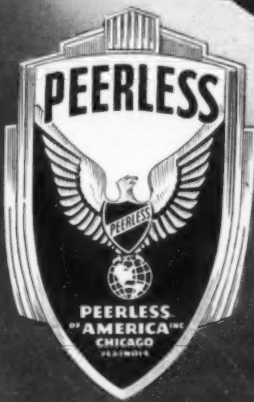
● This is the streamlined beauty with motor mounted in the center of its Round Coil—the new Peerless "Pie Plate" where all the primary and secondary surface is IN THE AIR STREAM. The fans are round—why should coils be square? Even the return bends on this coil are in the air stream. There is no waste surface. The Unit Cooler is a condensed package of refrigeration power, occupying

small space for capacities given. Unfailing mechanical performance creates gentle air velocities for dependably efficient cooling, producing superior performance at minimum operating cost. Installation is an easily accomplished, one-man job. For use in all types of fixtures and walk-in coolers where general refrigeration is required. Complete with built-in heat exchanger and suction spinner.

Model No.	List Price	Capacities B.T.U. per Hr. at Given T.D. Between Air and Refrigerant			Motor and Fan Characteristics				Overall Dimensions Including Motor			Connections		
		1°	10°	20°	Motor H.P.	R.P.M.	Fan Size	C.F.M. Capacity	Height	Width	Depth	Liquid	Suction	Drain
66	\$59.15	65	650	1300	1/100	1550	8	210	13	11 1/8	6 1/2	1/2	1/2	1/2
96	70.50	95	950	1900	1/100	1550	8	200	13	11 1/8	8	1/2	1/2	1/2
126	80.00	125	1250	2500	1/100	1550	10	350	15	13 3/8	8	1/2	1/2	1/2
226	110.45	225	2250	4500	1/30	1000	12	540	18 1/4	17 1/8	10	1/2	1/2	1/2
326	130.00	325	3250	6500	1/30	1000	12	500	18 1/4	17 1/8	10	1/2	1/2	1/2
456	160.00	450	4500	9000	1/30	1000	16	1050	21 3/8	20 1/4	11	1/2	3/8	1/2
606	190.00	600	6000	12000	1/30	1000	16	1000	21 3/8	20 1/4	14	1/2	3/8	3/8
906	248.00	900	9000	18000	1/6	1140	20	1800	30	28 1/2	12	1/2	3/4	3/8
1256	326.00	1250	12000	24000	1/6	1140	20	1700	30	28 1/2	15	1/2	3/4	3/8
1856	387.00	1850	18500	37000	1/6	1140	24	3000	42 1/2	41	13 1/2	1/2	1" O.D.	3/8
2456	460.00	2450	24500	49000	1/6	1140	24	2800	42 1/2	41	16 1/2	1/2	1" O.D.	3/8

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Approximately 2500 gallons filtering capacity.

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## INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from Page 1, Column 1)

ing tribute to anyone—without interference and with full play for their ambition to be productive and to get ahead. At the present time the right to work is seriously restricted and some of that important basic freedom has been lost.

"Political struggles for power have crept into the departments of our factories. Political power based upon promising men more wages for less work through the force of mass pressure and regardless of its effect upon individual productiveness and individual advancement, and upon costs and prices. Power, unfortunately often based upon fostering distrust and hatred of management—the old trick upon which from time immemorial dictators have had to fall back for maintaining cohesion of their subjects—conjuring up an imaginary enemy when no real one exists.

"Some of you no doubt will start pretty well down the line in large manufacturing institutions. When you find your attempts to be productive, to be cooperative with the management, to move freely from job to job as you demonstrate an ability to learn rapidly, your desires to work longer and harder are frowned upon and resisted possibly even by violence. When you find that your wish to look upon the manager or the boss as your friend and leader is scorned and ridiculed;

that local shop politicians through organized force are attempting to bring everyone to a dead level in order to gain greater numerical support; intimidation; unfair elections—do not assume that these various forms of restriction and loss of freedom have always been the rule, nor that they need always remain that way. Due to your education you will understand much better than the vast majority of people that the result of this trend toward loss of freedom to work is higher cost of goods produced, consequent lessening of the number of people able to buy, shrinkage of markets, loss of incentive to invest in enterprise and in general a reduction in the standard of living.

"These restrictions in the right to work have not always existed. As a matter of fact they have developed mostly in the last 18 years—during the time when the country, after having received a bad jolt in the depression which started in 1929, turned to the New Deal leadership with all its vagaries and socialistic trends. Loss of the free right to work was stimulated and fostered by legislation and particularly by the Wagner Act, and by the governmental regulations under which we have had to live under the New Deal Administration.

### Taft-Hartley Cuts Some Of Nation's Bonds

"The Taft-Hartley Law, far from being a labor enslaving act as proclaimed by some of the prominent labor leaders, is a step, but only a step, toward freeing both labor and management from some of the bonds restricting individual freedom. Pub-

lic opinion surveys show that the true nature of the Taft-Hartley Law is widely understood despite the active propaganda and political threats of certain labor leaders.

"One of the rights partly restored to management by this Law is the right to talk more freely to employees. It is hard to realize, even at this time, that we could have had a law on our Federal books which would so restrict the rights of management to talk to its people as did the Wagner Act before its modification under the current Law. Whereas, under the former law labor could be subjected to floods of propaganda, the employer was forbidden to speak. The fact that he is more free under the present law and that labor is freed of some of the coercions that were formerly legal is an encouraging indication of an awakening which may eventually restore some of our important lost freedom.

"Repressive restrictions of the right to work are not of course confined to the shop. You will find offices and engineering departments 'organized.' In an organized engineering department you are pressed to vote from time to time for Joe Dokes or John Smith to represent you as to wages and conditions of employment and various other matters with the management. Whatever seeming advantages lure people into these arrangements are more than offset by the loss of personal contact with the boss and with restrictions upon individual initiative and advancement.

"An organized engineering department cannot compete with one composed of free Americans—in spirit, in morale, in the rate of engineering progress and design improvement, in opportunities for individual advance-

ment nor in the satisfaction and pride of belonging to a progressive team.

"In your work you will run into many restrictions of freedom other than those I will emphasize today and I counsel you to challenge every one of them. When did they start? Why did they start and what can be done to remove them? But I wish to give particular emphasis today to Taxes. Ever-increasing taxes, both individual and corporate, mean ever-increasing loss of freedom and tend directly toward destroying the American industrial system and everything which has brought progress and prosperity. History shows many flourishing civilizations have been destroyed by ever-increasing taxation.

"High taxes destroy your freedom to spend or invest your surplus as you please, and they destroy your incentive to invest your surplus in industry.

### Government Gets One Third Of Your Income

"Suppose you are a thrifty individual who starts right in with the idea of budgeting and limiting the amount spent for food, clothing, shelter and amusement; and if free to do so would have a portion of your income to put it into insurance, annuities or investments. Twenty years ago you could have done that nicely but today the government reaches in your pocket and in one form or another takes at least 1/3 of your income.

"If you have within you the ability to earn a high salary, whereas under former conditions you could have intelligently directed a large part of it into capital investment, the government now steps in and says: No, we will first take 40%, 50%, 60%, 75%, 80% or more of your income. Many men who grew up under the relatively free incentives of former years are puzzled to know how their sons, no matter how capable they may be, are to have equivalent opportunities for building up savings, surpluses, fortunes for their families. You often hear it said to young men—No matter how big a salary you may earn in industry, you can't keep enough of it to accumulate even a modest fortune! But if, as an owner or part-owner, you could start or go into some growing concern where capital gains are only taxed 25% you might stand a better chance. Thus taxation has become an important factor in directing and molding the lives of the younger generation. While the differences in taxation that I have mentioned above might seem to tend to stimulate the creation of new businesses, further analysis will show these operations to be hedged about with increased taxes, governmental regulation and restrictions of individual initiative which have certainly not decreased the high mortality which has always been characteristic of new ventures. Cautious and experienced capital is not as venturesome under high corporate tax rates.

"I am warning you not to accept high taxes as inevitable nor as having always been levied upon individuals and corporations. I am warning you also not to accept the current heavy military demands as a sufficient reason for the continuation of such high taxes. The military establishment can be more efficiently operated and the expenses of the Federal Government must be radically reduced.

### Younger Generation Must Not Be Bled White

"The younger generation need not permit itself to be bled white by government taxes; and is, I strongly believe, intelligent enough to avoid the pitfalls of socialistic beliefs that a paternalistic government can provide everything for us.

"We may live in a district where we get cheaper electricity from a government-owned project which keeps books without making the provisions for depreciation and taxes required by privately-owned power producers. The actual cost of operation is, in all such cases, higher than privately operated plants, because it is impossible for governmental management to create and maintain incentives and high efficiency produced under private management. Therefore any savings enjoyed by the purchasers of this cheap electricity are paid for by the government dipping into the pockets of the taxpayers. The total cost to the community at large is greater and not less. The trend toward government ownership and operation means higher taxes, less efficient operation, less incentive to save and invest, less opportunity for individual advancement and the inevitable decline of our economy.

"Free Federal medical care is an illusion. A Federal medical system would inevitably draw a larger part of the national income than a private medical system and under bureaucratic management would be less efficient and of less value to the public health than the competitive system and would have to be paid for out of taxes.

### Industrial Research Is Birthright of Business

"Last year I went down to Washington and opposed the Fullbright Bill which would have put the government into applied industrial research on a tremendous scale. The theory of the well-meaning promoters of this legislation was that government branch offices all over the country could receive with an open hand the thread-bare inventor, and either lead him to the right factory or the right investor, or explore markets for him, or actually engage in research and development of his invention, help him get it patented, etc., with the result of helping the small inventor and of putting more inventions into small business. Of course a practical understanding of industry clearly indicated that such

(Continued on next page)

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Capacitor Motor—Built in sizes from 1 to 20 horsepower



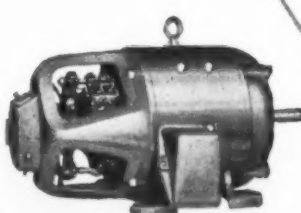
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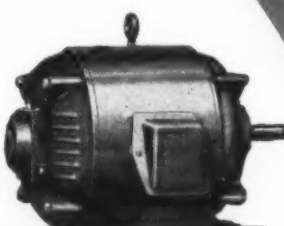
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## INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from preceding page)

governmental offices would not be competent to give the inventor correct advice, would tend to channel inventions into the big or known industries instead of into the unknown small shops and investors from which spring up our new industries, would cost literally billions of dollars and would constitute tax paid competition to private industry.

"Only constant alertness will stop this trend toward socialistic government and only a very alert younger generation will be able to restore the function of government to its former boundaries under which private enterprise flourished to the best advantage.

"The present rates of taxation syphon off so much of the national income that capital is not being formed out of savings at the rate necessary to maintain our former rate of industrial progress.

"In 1947 total corporation profits are reported as 28.0 billion dollars.

Taxes 11.1 billion dollars.

Retained Profit 16.9 billion dollars.

Dividends 6.6 billion dollars.

Added Capital 10.3 billion dollars.

Actually used for Capital Outlay 25.0 billion dollars.

Deficit 14.7 billion dollars.

"The amount invested in capital facilities since the war has been very large, and in 1947 was 14.7 billion dollars more than the capital retained from earnings, but it has been paid out of accumulated surpluses due to the inability to make such capital improvements or extensions during the war. Despite the reputed high profits of corporations, at the present time capital is not being formed at the rate absolutely essential for the continued progress of our country and we are headed toward a slowdown in our standard of living.

### Individual Incentive Curbed by Taxation

"Substantial increases in the military expenditures, unless accompanied by more than offsetting economies in governmental expenditures, constitute a situation that is pretty bad for you, the younger generation. The rate of improvement in our standard of living is slowing up due to the monkey-wrench being thrown into individual incentive and to excessive taxes consuming capital and preventing adequate capital formation; due to obstacles to individual advancement, and to people looking too much for support by paternalistic government.

"In recent years insidious attacks have been made on our patent sys-

tem, and only continued alertness will prevent legislation slipping through which will seriously undermine that great incentive to individual invention and to investment in industry.

"In the last twenty years class strife has been promoted in this country as a means of acquiring political power and is a very large factor in the present political campaign.

"I have found from experience that once the men of our country understand what they are up against and grasp the nature of a problem, they go after it and solve it. The businessmen . . . the engineers . . . those who should understand the American system of Competitive Enterprise, have not yet developed the art of teaching it to others so that they in turn may resist the attacks which would destroy and so that they may restore and protect the freedoms which alone assure their continued well-being and progress.

"We need more people to understand the American Individual Enterprise System—to explain it to others—to preach it—to live it in its best interpretation—to fight for it—to assure its restoration and preservation. The task of stopping and reversing the trend toward too much government and stifling taxes will rapidly fall on your shoulders. It is the basic challenge you will face.

"Without victory in the fight for our American system your talents as engineers and as businessmen, will be restricted or stifled. You cannot escape your responsibility for meeting this challenge to your freedom and to your success. A determination to do all you can to fight the subtle and dangerous foe of socialistic and communistic rust, rot and corrosion must be in the forefront of the life objectives of your generation else America will have passed its zenith, and our future history will record a steady decline in the standard of living and the happiness and satisfaction of living.

"It is still true that in most occupations there is plenty of room at the top. Most organization charts are roughly triangular in shape, with the largest numbers of people at the base, and fewer and fewer in the upper strata until you find the boss all by himself at the top. It looks like more room at the bottom, but the fact is that in all progressive organizations the fellows in the upper strata are continually looking over the more crowded groups below to find those who can be moved up. Those who have demonstrated the qualities of wisdom, skill and force which are needed to do the responsible work which, by the way, is the best paid because the demand is greater than the supply.

"If a man has a strong yen for running a peanut stand, the chances are that he can develop lower costs, better quality, more attractive goods display, and fine personal selling to a point where he will be successful and happy. Don't take me too literally. I would recommend a market study to give some indication whether, granted the superior quality and other accomplishments, there

would be enough customers to buy the peanuts.

### Specialize In Things You Do Best

"A lot of things have bearing on a man's selection of his first job—but I am trying to say that from my observation I believe that first in importance is to find out what he can do best—and that cannot always be determined before taking the first job or selecting the first employer.

"Once a fellow takes a job he should develop the widest possible awareness of what is going on around him and in the world. Lots of men quickly fall into a groove and, looking neither to the right nor the left, there they are. If they are on the wrong road they never know it. A good driver is keenly aware of the speed, the direction and usually of the intentions of the other drivers who, added all together, make the traffic. And due to his alertness, his adaptability to circumstances, his quick taking of openings, and yet avoidance of trying to hog the road, usually gets where he should quickly and safely. Not so with the driver who blindly tries to go straight down a road oblivious of what is going on around him. I believe that even the technical specialist who is too self-contained and pays too little attention to what is going on around him, thereby unnecessarily limits his usefulness.

"So the wide-awake alert man, if he has picked the wrong occupation or the wrong employer, can find it out and change before it is too late. But he had better find it pretty soon and not become a chronic rolling stone.

"In every industry there are pro-

gressive organizations that want better and better engineering, better manufacturing, better selling. There is a shortage of good engineers in most industries, and new frontiers of engineering are continually opening up.

"No one can label Opportunity for you. I went into the Detroit Gear Company in 1923 under instructions to liquidate it so as to pay off the preferred stockholders. It was considered a hopeless case. But to the boys that joined me at the time the label should have been 'Opportunity.' Instead of liquidating Detroit Gear they brought it to life and later it became the birthplace of NORGE.

"If you use reasonable care in selecting employment with an alert progressive organization, or one into which you feel you can yourself inject the needed spirit—you can make your own opportunity.

"I would commend your thoughtful attention to a formula which I have found useful. Take every task or problem that confronts you and divide it into three parts—

1. WISDOM
2. SKILL
3. POWER

"The first part—'Wisdom', consists in knowing what to do. Most tasks easily break down into a number of things that need to be done. List these things as they occur to you, without too much regard to their proper sequence, and without too much thought as to how to do them. Then rearrange this list of things to be done into their proper sequence and you have demonstrated the Wisdom to analyze the task into its parts.

"Then comes the No. 2 item—'Skill.' This is concerned with how to do each of the things listed. Each step can be studied separately and

with the necessary Skill outlined, studied, acquired—can be performed.

"No. 3—'Power'—this consists in the application of action. Your own action and that of others—of skillfully taking the steps dictated by Wisdom. Make a time table, a check list and follow it through.

"And, in my opinion, you must actively concern yourself with the fight to recapture the right to work and to restore and to maintain the freedoms under which the American Individual Enterprise System has given us the highest standard of living ever known to man. And you must apply your educated minds to the understanding of taxation, and to the dissemination of that understanding so that excessive taxes shall not kill your own opportunities nor cause history to write down America as another civilization destroyed by taxation. Our very foundations are under the attack of vicious ideologies.

"Did I say you must do these things? Well, I mean, of course, if you really want to run the race with as much freedom and with the incentives and satisfactions enjoyed by your forbears 20 years ago and to turn over to your own children a better heritage of freedom than we have turned over to you.

"This is still the land of Opportunity because of the momentum of the past. I am happy in the thought of young men like you coming along, not only to carry to greater and greater heights our technical knowledge and skill, but to join those of us who are fighting for more freedom and less government and taxes, so that this may remain the land of Opportunity not from the momentum of the past but of its own dynamic energy."

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Successful merchandising is the ability to adapt your product to multiple uses, new markets. Here, in the Freeze-O-Matic Junior, is the "little GIANT" with everybody a prospect!

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• Fixtures are scientifically engineered and guaranteed!

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*Exclusive!*

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## Our Markets Grow

A WELCOME boon to the perplexed advertiser and marketer who must do long-range thinking is the pamphlet, "Forecasts of the Population of the U. S.: 1945-75," a report which can be obtained from the United States Census Bureau.

A year before this report finally made its debut, its preparation was begun by P. K. Whelpton, associate director of the Scripps Foundation for Research in Population Problems, Miami University (Oxford, Ohio), and two of that bureau's experts, Hope T. Eldridge and Jacob S. Siegal.

The estimated U. S. population for the year 1975 is around 166 million, Whelpton believes, allowing for the cumulative effects of present birth, death, and immigration curves. It is possible, though not probable, that we might ring the bell with a total of 185 million people by that time. On the other hand, it's possible that our population peak may be reached in about 20 years, and in 1975 our population curve may slide on a continuing downward slope to around 151 million.

A gradual decline in the birth rate is desirable, says Whelpton, because it will prolong the life of our natural resources, and raise the general quality of the population to a higher level. The final result of this decreasing birth rate may be a higher standing of living, depending on whether or not the consumer industries are able to balance gracefully the decline in construction industries.

With an eye toward those advertisers whose interests are based upon the family group, Whelpton offers the following pertinent data:

Number of families will be in the 43-48,000,000 category by 1960, as compared with the present 40,000,000. The present ratio of 99 males to 100 females may remain static, or it may change to 98 males per 100 females.

This report predicts that racial groups in the United States will tend to merge and dissolve—and that will be a good thing for America. In assimilation we'll achieve unity.

In regard to age groups, advertisers and marketers should note that there undoubtedly will be a large accretion of persons over 65—probably hovering around the 17-20,000,000 mark by 1975, in contrast to the present 11,000,000. That situation will, of course, influence the demand for specific types of consumer merchandise.

A diminution of the group of workers in the traditional 18-44 age bracket probably will occur, predicts Whelpton, along with a corresponding increase of workers in the older age group (45-64). This latter group now numbers 30,000,000, and probably will grow to 39-43,000,000 in the years to come. Older workers will be valued more and more as time goes by.

Prognostications for the under-18 age classification of wage-earners are somewhat nebulous. The present 45,000,000 teen-age employed category could rise to 52,000,000, or it might fall to 34,000,000 by 1970.

The meaning of these statistical projections to the alert businessman may be summed up in the following analysis of present population trends:

1. A greater demand for small homes and apartments will arise, due to the much larger number of middle-aged couples needing little or no space for children.
2. Fewer persons will marry for the first time from now until 1976, compared with recent years. Thus, demand for gifts, furniture, etc. may fall off temporarily.
3. The number of school-age children will continue to rise until 1952, thanks to the extraordinarily high birth rate between 1939 and 1947.
4. Our country must expand its hospital facilities to accommodate the sicknesses of the larger numbers of older people, and may have to assume a greater social security burden for the same reason.
5. A decline in the availability of under-18 labor will be experienced until 1951, after which these impetuous youngsters will vie for jobs until 1958.

Of one thing we can be sure: our consumer population is growing.



## Sporting Goods Store Boosts Taxidermy Business And Freezer Sales by Installing Walk-In



Above is the walk-in sharp freezer installed in the Sportsman Store in Reno, Nev. Hunters' trophies are kept here until the taxidermist is able to mount them.

freshly-killed game to The Sportsman, where it will be sharp frozen and kept under refrigeration until time for mounting. Chester Piozza handles most of the taxidermy work himself; only small amounts are sent to other cities.

The freezer has also proved to be a powerful asset in the merchandising of the complete line of Crosley home freezers which the store now carries, it was reported.

"We point out to hunters and fishermen how many advantages a home freezer has for keeping game in perfect condition for many months, and have wound up with a surprising number of sales," Chester Piozza said. "Once the customer sees the advantage of sub-zero refrigeration through using our walk-in boxes, we find it much easier to sell him a home-freeze unit."

To call attention to its home freezers, displayed at the front of the store, the Piozzas—in combination with a Reno air conditioning and refrigeration firm—offered a Frostmaster freezer to the person catching the largest trout in the Truckee River, near Reno. Several trout were displayed in the freezer to help arouse interest in the promotion.

## Ackerman, Siegert Handle R. H. Bishop Sales In East

CHAMPAIGN, Ill.—Appointments of Morton L. Ackerman and Joseph R. Siegert as division sales managers for R. H. Bishop Co. here were announced recently by R. H. Bishop, president.

Ackerman's territory includes the New England states, New York, northern New Jersey, and a small section of northern Pennsylvania. His headquarters are at 225 Lee Ave., Yonkers, N. Y.

From his headquarters at 401 North Broad St., Philadelphia, Siegert is covering southern New Jersey, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, and the District of Columbia.

## Born Appoints M. Gordon

ATLANTA—Announcement is made by the Born Refrigeration Co., distributor of air conditioning and commercial refrigeration, of the appointment of Melvin Gordon as product manager.

## Fedders-Quigan Expects \$30,000,000 Sales In 1948

BUFFALO, N. Y.—Sales of Fedders-Quigan Corp. are expected to hit the \$30,000,000 mark this year, a 450% sales increase in the last four years, according to Chairman Frank J. Quigan.

Last year sales were \$20,000,000, and profits \$1,700,000. In 1944, the year Quigan started buying stock in what was then the Fedders Mfg. Co., sales were \$5,500,000 on which there was a \$15,000 profit.

## Buckeye R.S.E.S. Will Hold Second Annual Picnic July 11

DAYTON, Ohio—Buckeye State Association of Refrigeration Service Engineers Society will hold its second annual picnic here on Sunday, July 11.

Admission is \$5.00 per couple, children free. All reservations, including hotel rooms, should be made through D. R. Goll, 220 Fernwood Ave., Dayton, according to the announcement.

## Low Temperature Storage Keeps Hunters' Pelts Until They Are Mounted

RENO, Nev.—Early this year, Chester and Link Piozza installed a 7-ft. by 8-ft. by 8-ft. walk-in sharp freezer in their sporting goods store, The Sportsman, at a cost of \$2,300.

The result, they say, has been a tremendous flood of requests for their taxidermy service from sportsmen who otherwise would have given up the idea of having game and fish mounted. In addition, according to the brothers, the big refrigerator has spurred the dealership's home freezer business.

Located in a separate room, the walk-in is cooled by a 2½-hp. Brunner condensing unit equipped with a city water cooling system and a heat exchanger. The equipment maintains a year-round temperature of -10 to -15°. Interior of the box is finished in white enamel and the floor covered with a waterproof substance to facilitate cleaning.

The 10-year-old store reportedly has built up a large annual sales volume in catering to the hunters and fishermen who fill up "The Biggest Little City in the World" each summer. For many years, The Sportsman has featured the taxidermy service, mounting a variety of game fish and heads of several types of animals. Last year, more than 200 heads were mounted.

Until the refrigerator was installed, the taxidermy process was a "hurry-up proposition," with the taxidermists hustling to get the animals cleaned and skins tanned before natural deterioration set in. Unless the sportsman had access to a commercial locker plant or some other form of refrigeration, he was likely to lose his pelt.

Now, however, hunters and fishermen throughout the state can bring



## —in this new Ferro-Therm insulated food storage plant

THE new refrigerated plant for food which Western Dairy Products, Ltd. has built in Honolulu is being acclaimed by visitors as a model of modern efficiency.

The plant has four freezer rooms and two chill rooms, measuring 20' x 20' x 10', which are completely insulated with Ferro-Therm Steel Insulation. The freezer rooms have six sheets of Ferro-Therm, and the chill rooms have five sheets of Ferro-Therm, in the walls and ceilings. Four rooms are operated at 0° F and two rooms at 35° F. Before the freezer rooms were finished, a space was left open above the doors, which was

insulated with only three layers of Ferro-Therm. Yet, when the inside temperature was 5° F below zero, and the outside temperature plus 75° F, tests showed that Ferro-Therm made a perfect seal against the transmission of heat.

Mr. Mortimer J. Glueck, President of Western Dairy Products, Ltd., states, "The rooms are performing far in excess of our outside expectations." And that statement exemplifies Ferro-Therm's amazing record of efficiency—not only in food storage and processing plants, but also in breweries, meat packing, chemical storage, portable units, wineries and test chambers.

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Page 3 D-1 and 3 D-2 Engineering File

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## New Philadelphia Office Opened by Marley Co., Inc.

KANSAS CITY, Kans.—The Marley Co., Inc., manufacturer of cooling towers, water cooling equipment and spray nozzles, has opened a new district office in Philadelphia at 1112 Packard Building. Robert M. Sharp is in charge.

Sharp has been associated with cooling tower manufacturers several years. He received his B.S. in electrical engineering from Rutgers university, and his M.S. in chemical engineering from New York university.

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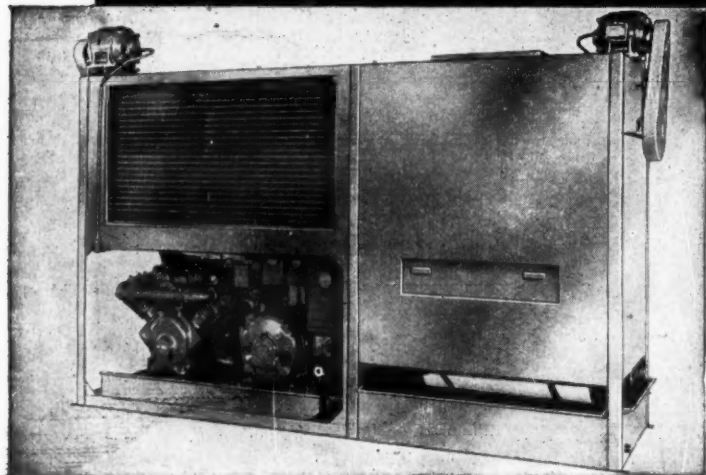
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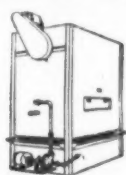


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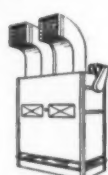
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## Reno Firm Improves Package Installations With Additional Fans, Ductwork & Baffles

### Newspaper Advertising, Trained Salesmen Get Customers

RENO, Nev. — A successful sales program for the merchandising of package air conditioning units has been developed by Hasco (heating and air conditioning supply company) here.

The Hasco organization, plumbing, heating, and air conditioning contractors, launched the opening gun in the air conditioning sales program late in 1947, when deliveries of package air conditioning units (General Electric) from 1 to 5 tons began coming in. Intensive newspaper advertising, plus a personal sales program carried out by specially-trained outside salesmen, has been going full-blast ever since.

#### INSTALLATION ENGINEERED

"The reason that we have been able to sell dozens of small-scale air conditioning systems built around the package-type of unit is the fact that we 'engineer' every installation, and provide the ductwork which all such systems actually require," Laurence Kearny, air conditioning and heating engineer of the company, pointed out. "Most instances in which an air conditioning prospect has been dissatisfied with the use of the package-type unit have stemmed from the fact that the unit was merely carried in, connected and set in operation—with no forethought whatsoever as to heat load, air dis-

tribution, circulation, etc.," he said.

Thus, each of the scores of package air conditioning installations which have been made by Hasco's in Reno's "moneyed market," have involved the use of exhaust fans, ductwork, baffles, etc., to get the best possible distribution of cooled air in bars, cocktail lounges, homes, lawyers' offices, courts, restaurants, and hotels. Among some of the better-known installations which Hasco has made in the past 18 months are the Brown-Bilt Shoe Store, the Merry-go-round Restaurant and cocktail lounge, the Office Bar, the Picadilly Lounge, the Bank Cafe, Mixson's Cocktail Lounge, the Golden Saloon, the Golden Keno Club, and many others.

G-E package air conditioning units running from 1 to 5 tons have been used in all cases, with several multiples of each. A typical example is the Golden Keno Club, which has five 5-ton units, so arranged that operating along a single duct, they may cool a large cocktail lounge, and during the rush periods of the day, a gambling club as well—additional package units cutting in on the ductwork as thermostatic controls show the need. All five operating simultaneously through a 16 x 8-in. duct are sufficient to cool both rooms, with a total of 25-tons air conditioning output.

#### MAKE STUDY

In engineering every job, Hasco is careful to explain to prospects that "a package air conditioner alone is not enough." A thorough thermometer-study is made of heat spots, circulation and air distribution in the installation location before any other steps are taken. Therefore, ductwork which may increase the price of the installation anywhere from \$200 to \$600 is then recommended, tested, and approved.

In many cases, it has been necessary to install both return and supply ductwork, carefully spotting the louvers over the high latent heat spots represented by such things as blackjack tables, dice tables, rows of slot machines, cashier's office, etc., sure to be clustered with people during the busy periods of the day.

#### CHOOSE CENTRAL LOCATION

Hasco has similarly engineered package air conditioning unit installation in professional and business offices. Instead of merely setting a cooler to take care of a single room, a central location is chosen wherever possible, and dampered ductwork which permits distribution of the air to any combination of rooms as desired, is installed. The result has been extreme enthusiasm on the part of customers, and "every small-scale air conditioning unit we have installed has sold others in the near future," as Kearny put it.

Hasco's outside salesmen, all of whom have undergone specialized training in air conditioning from 5 to 50 tons, are all capable of estimating the heat loads which must be overcome in any installation, and in drafting the ultimate job. This is then approved by either of Hasco's two air conditioning engineers, and a handsome presentation made up which goes to the prospect, for his approval or disapproval.

### Vilter Issues Bulletin On Evaporative Condensers

MILWAUKEE — Evaporative condensers are covered in a colorful new bulletin recently published by the Vilter Mfg. Co. here, producer of refrigeration and air conditioning machinery and equipment.

The bulletin points out six advantages of the evaporative condenser over other refrigerant cooling mediums.

Fully illustrated with photos of actual installations and important construction features, the catalog includes description and diagrams of the operation and recommended application of Vilter evaporative condensers. A page of specifications showing dimension and engineering data is also set forth in the eight page bulletin.

## A.G.A. Says Electric Utilities Interested In All-Year Gas Air Conditioning

NEW YORK CITY—The current year is bringing a marked change in the pattern of gas all-year air conditioning with electric utilities in some areas now discussing the possibilities of promoting sales of certain types of gas all-year air conditioning, declares a recent report of the American Gas Association.

"Electric utilities generally have not been particularly interested in acquiring a residential air conditioning load," states the A.G.A. "In some cases, they have discouraged it because of the increased investment required to provide service to operate air conditioning equipment in residential areas and the low annual revenue derived from summer operation only."

Servel, Inc. and Surface Combustion Corp. are in production on residential units and hundreds of such units are in operation in homes in every part of the country, says the report.

Merchandising plans of many gas utilities for 1948 include promotion of gas air conditioning. Recent surveys indicate more than 30,000 immediate prospects in areas where no shortages exist or in homes now equipped for gas heating in restricted areas, it is stated.

Commercial and business areas also have proved profitable markets for gas air conditioning, the report avers. Among the manufacturers of commercial gas air conditioning are Surface Combustion Corp., Bryant Heater Co., and Eureka Williams Corp.

Gas air conditioning, as it is in practical operation today is achieved under different processes. Under one

method during the heating cycle steam is developed and delivered to a heating coil over which air is drawn. The heated air passes through a humidifier section where moisture is added and it is then delivered to the spaces to be heated.

During the cooling cycle steam is delivered to an absorption refrigeration unit containing lithium bromide and water. Air is cooled and dehumidified as it passes over the cooling coil. The same equipment is used for both cycles and climate control is achieved by a flick of a switch.

Under other methods air conditioning is achieved by absorption of excess moisture in air through contact with lithium chloride or silica gel. This moisture is removed from the absorbents by application of gas heat or other means and the absorbents re-used in a continuing cycle. In winter months under these processes, moisture can be added to the air for climatic comfort.

"Economic factors are causing an increasing number of gas utility companies to include promotion of air conditioning in their new sales programs," reports the A.G.A. "Restrictions on sales of gas househeating are gradually lifting. With the gas air conditioning load to fill the valleys during the summer months, a total system load that will yield a year-round profit can be achieved."

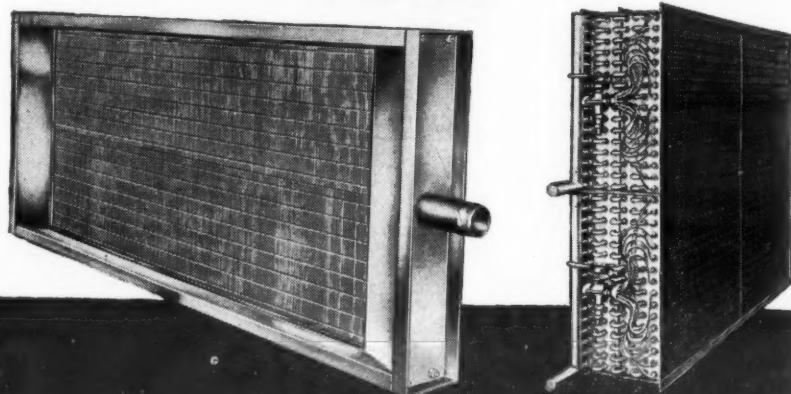
Gas utilities often have been asked whether or not the Faraday reversed refrigeration cycle, discovered nearly a century ago and today being publicized as the heat pump, is not applicable to gas. Manufacturers of heat pumps today are producing this equipment for operation with gas.

### Restaurant Installs Conditioning Fine Arts Bldg. To Be Cooled

ATLANTA — Born Refrigeration Co. here has completed installation of an air conditioning system in Joe Veale's restaurant, 222 Spring. The unit was entirely engineered and installed by Born.

PADUCAH, Ky.—The Ed D. Hannan Co., of Paducah, has received a \$21,780 contract for installation of an air conditioning system in the Fine Arts Building of the Murray State Teachers College at Murray.

## HEATING and COOLING COILS



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## Greater Services for the Patron Seen Boon to Popularity of Locker Plants

ITHACA, N. Y.—More service to the patron was the emphasis of the Frozen Food Locker School held for plant operators at Cornell university, June 8 and 9.

Cooperating at this conference were the Schools of Nutrition and Home Economics and the departments of animal husbandry, agricultural economics, poultry, vegetable crops, and bacteriology of the College of Agriculture while representatives of the New York State Frozen Food Locker Association acted as chairmen of the sessions.

Whether it's better sanitation of the locker plant, deboning the meat to aid the housewife, expert care of meat products, or giving tips on the best methods of preparing frozen foods, additional help for the customer is important in promoting the frozen food industry, speakers at the conference informed the visiting operators.

Clean working quarters and equipment, avoidance of contamination of meat by too much or careless handling, and quick, complete, and thorough cooling were points emphasized by Dr. C. N. Stark, professor of bacteriology at Cornell. If locker owners will find out what needs to be done about sanitation and then go about doing it they can avoid a lot of unnecessary trouble in having a state inspection system set up, he advised.

Prof. John Hartman of the vegetable crops department pointed out that to get good frozen products, vegetables must be gotten to the freezers as soon as possible. The quality of such vegetables as corn and peas deteriorates in a matter of hours, he stated.

Prof. Darrah of the department of agricultural economics told the visitors that the booming days of the frozen food industry are past and now efficient operation of the plant is important if the owner is to be successful in the business.

From the poultry department of Cornell, Prof. L. M. Hurd demonstrated killing, scalding, and picking

chickens, Prof. H. E. Botsford showed how to prepare chickens for freezing and skin broilers, and Prof. G. O. Hall did the same for turkeys, ducks, geese, and game.

Prof. G. H. Wellington of the animal husbandry department directed a beef slaughtering demonstration and with the aid of H. A. Holley of the meat sales department demonstrated and pointed out the advantages and disadvantages of deboning meat.

"Removing the bone from a roast or telling the housewife the best ways to cook different cuts of meat are little extra services that the locker owner can give his patrons," Dr. Wellington suggested.

Wilbur Witte of the Biro Saw Co., pointed out the advantages of power saw meat cutting and a representative of the Griffiths Laboratory put on a pork curing demonstration for the conference.

A ham contest, featured at the school, gave the conferees a chance to learn what methods different plants are using in turning out quality hams for the consumers. Hams were judged first by their appearance and then cooked and tasted. The ham ranked in first place came from Zero Food Storage, Fort Plains, N. Y. The second place winner was Richtmyers Food Market of Hornell, N. Y., and third, Mother Zero Locker Plant of Ithaca, N. Y.

The College of Home Economics held a special women's program during part of the conference. This included a talk on processing fruits and vegetables for freezing by Mrs. Lola Dudgeon, professor of Home Economics, the "new look" in packaging by Mrs. Nancy Masterman of the School of Nutrition, a tour of the School of Nutrition and a tour of the Cornell campus.

Wednesday evening featured a banquet with Mrs. Nancy Masterman and Lee Hamrick of Agricultural Advertising and Research, of Ithaca as the main speakers with Roy Kuhns, president of the New York State Locker Association serving as chairman.

## Custom-Built Structure Not Necessary

### Old Building Remodeled To Provide Up-to-Date Locker Plant

ENGLEWOOD, Ohio — A frozen food locker plant with all aspects of a "model" cross-road-community installation—small and compact in design, yet equipped with adequate facilities to handle a substantial volume of business—was opened here recently by L. E. Smith, long-time Frigidaire commercial refrigeration expert.

Operated by the owner's son, Robert Smith, a returned Army veteran, the plant houses chilling, aging, meat processing, bulk storage, curing, and lard rooms in addition to storage lockers and a smoke house.

Like thousands of other locker operators, the Smiths found that a brand new, custom-built building was not necessarily essential to the establishment of a modern, locker plant. Instead, they saved considerable time, effort, and expense by finding a suitable structure that could be remodeled to suit their needs.

Housing 680 frozen food storage compartments, the locker room, including the walls, floor and ceiling, is insulated with 6-in. corkboard. In addition, there are 4 in. of fiber glass insulation between the studding and outside exposed walls and between the ceiling joints. The attic space is ventilated.

#### LOCKERS 7 TIERS HIGH

Individual locker compartments, 24 in. by 15 in. by 30 in., average 6½ cu. ft. of storage space each. Of the total number of lockers, there are 66 of two-compartment size reserved for overflow. Locker compartments are mounted seven tiers high, with the four lower levels equipped with drawer-type facilities for customer convenience.

Storage temperature of the locker room is maintained at 0° F. by eight banks of plates refrigerated by a 5-hp. Frigidaire water-cooled compressor. Defrosting is accomplished by hot gas—one bank of plates at a time.

Also located in the locker room is a special quick-freezing unit, consisting of 10 plates, 9 ft. long and 22 in. wide. These plates are housed in a cabinet constructed of fir and protected by 2 in. of insulating board.

Because the freezer plates are isolated from locker room air, there is little frost accumulated. Freezing is accomplished at -20° F. Refrigeration for the freezer is supplied by a 3-hp. Frigidaire compressor.

The freezer cabinet is equipped with service doors and lock hardware. Wire freezer baskets hold approximately 25 lbs. of meat, permitting a minimum of handling as the product moves from the meat processing room to the locker, itself.

Gravity coils, equipped with special baffles and connected to a 1-hp. Frigidaire compressor, refrigerates the chilling and aging room. A summer-winter control insures positive room temperatures.

#### MEATS LOSE LITTLE WEIGHT

Smith says that gravity-type cooling coils cause only a minimum loss of weight for meats during the aging period. Aging ordinarily ranges from a few days to a maximum of two weeks—depending upon the individual customer requirements.

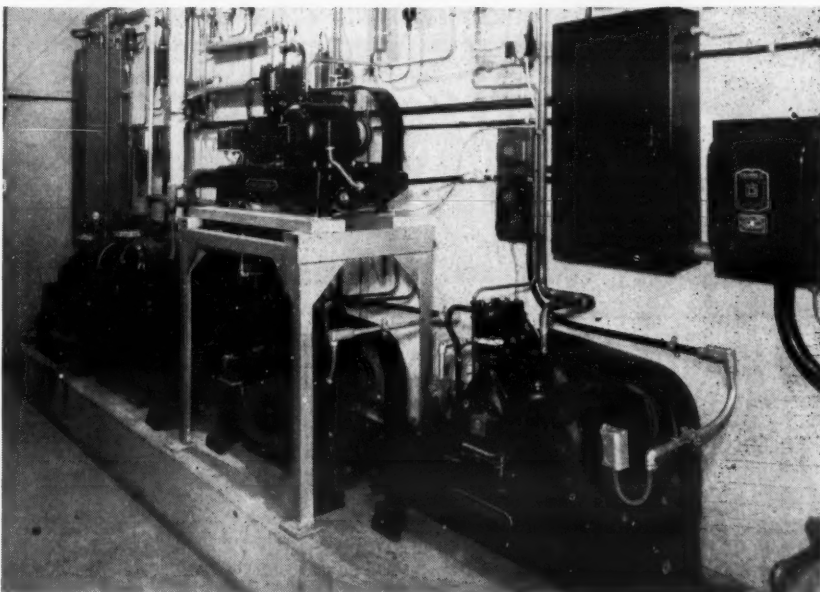
The meat processing room, like the modern butcher shop, is completely equipped. There are cutting and wrapping tables a 1½-hp. meat cutting machine, a 2-hp. food chopper, and packing house track scales.

Zero temperatures are maintained in the bulk storage room by a Frigidaire forced-air unit and a 3-hp. compressor. Fanned coils are defrosted by a Thermobank. Adequate space for blast-freezing products is provided. The curing room is also cooled by a Frigidaire forced-air unit, connected to a 1-hp. compressor.

In the smoke house and lard room is a large meat smoking cabinet, with dimensions of 4 x 6 x 8 ft. This



Meat processing room resembles modern butcher shop.



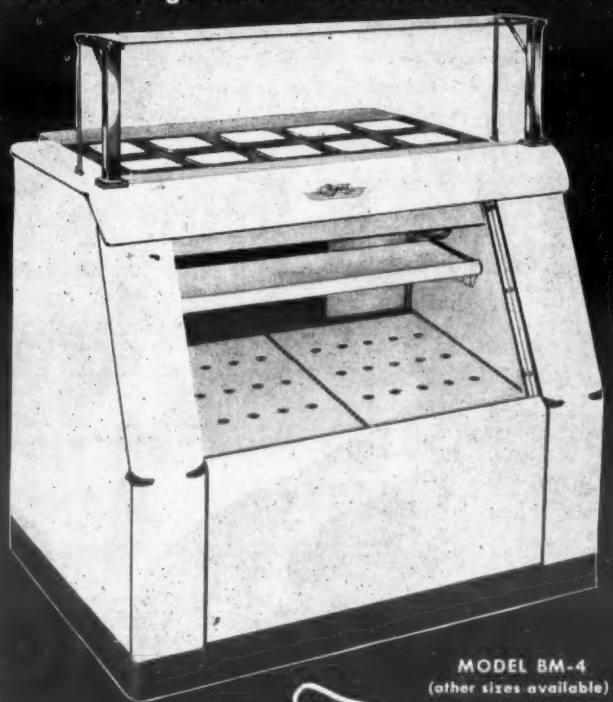
These reciprocating compressors supply refrigeration for the Englewood locker plant.

unit is insulated with 3-in. rock wool and is gas-fired. Temperatures are governed by an automatic control. A 60-gallon lard kettle, steam jacketed and gas-fired, is also part of the

equipment, together with a 25-gal. lard press.

Water for operation of the plant is supplied by an electric pumping system from a driven well outside.

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FOGEL Refrigerated "Luncheonette" Case



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So NEW, So BEAUTIFUL, So PRACTICAL, it almost sells itself. Don't Wait... Be one of the first to increase your sales and profits by selling the case that creates entirely new fields of prospects.

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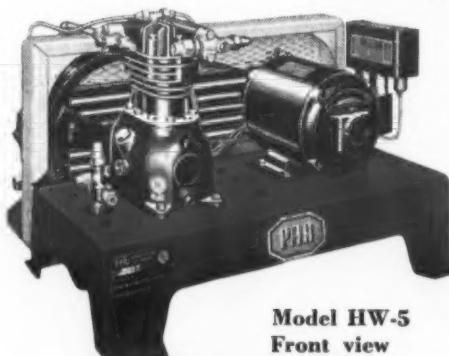
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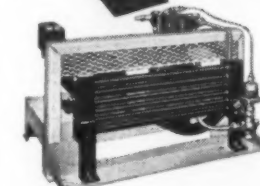
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with CLEANABLE CONDENSERS

HW-5 ½ H.P. Heavy Duty Unit

HW-7 ¾ H.P. Heavy Duty Unit



Model HW-5  
Front view



Rear view

Par Models HW-5 and HW-7, ½ h.p. and ¾ h.p., water-cooled units with cleanable condensers are now in the popular line of Par Condensing Units. These 2 units also feature small over-all dimensions permitting installation in small areas or close places.

Par's "Out Front" again, in providing a wide range of models and sizes for "tailored installations" . . . proper-size, proper-type units that give top performance in economy and efficiency.

See your Par Wholesaler for complete details and specifications on these new Par units and keep an eye on Par for future announcements.

PAR—Condensing Unit line sold exclusively through  
Franchised Refrigeration Equipment Wholesalers!

By Comparison—You'll Buy PAR

LYNCH CORPORATION

Par Compressor Division

TOLEDO 1, OHIO U.S.A.



for  
eye-appeal  
economy  
performance  
specify  
**Supremetaline**



profit-wise dealers choose  
**the jolly mixer**  
for tavern—for home

IT'S NEW! Nothing else like it! The Jolly Mixer provides finger-tip facilities for mixing simple highballs or fancy cocktails.

IT'S ECONOMICAL! Rapid service saves time, all-in-one facilities save space! Ice cubes (20 lbs. per freezing!), bottles, fruit, sugar, utensils, towels, cutting board, bottle de-capper, refuse receptacle—everything in one place!

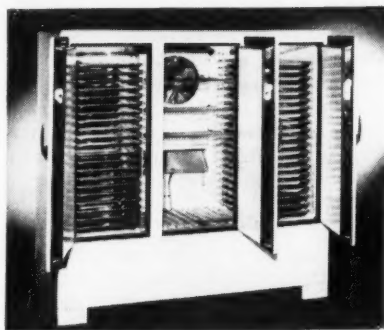
IT'S PRACTICAL! The Jolly Mixer is engineered to "mix" with other Supremetal underbar equipment and to mix drinks at the same time!

Write TODAY for catalog showing the complete profit-making SUPREMETALINE!

**Supremetaline**  
ALL-STEEL BAR AND BEVERAGE SERVICE EQUIPMENT

SUPREME METAL FABRICATORS, Inc. - BROOKLYN 11, N. Y.

## What's New



### Model Holds 42 Bakery Trays Plus Bulk Foods

DAYTON, Ohio—Said to improve the quality of baked goods as well as reduce inventory losses due to stale dough, a new 48-cu. ft. bakery refrigerator for dough retarding is announced by Frigidaire Division, General Motors Corp.

Divided into three separate compartments, the unit has space for 42 standard bakery trays. Two of the three 16-cu. ft. compartments are used to hold the trays, while the third is left free for bulk storage of yeast, eggs, cream, milk, butter, fillings, and similar baking materials.

By using the refrigerator, dough can be mixed and molded 24 hours in advance, saving as much as two

hours on nightwork, Frigidaire claims. Unexpected orders, it says, may be quickly filled and larger batches of dough prepared at one time.

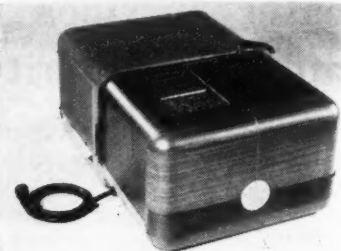
All interior surfaces are finished in white porcelain. The bar-type tray racks are made of hot galvanized, rust-resistant steel.

Forced air cooling is done by a Frigidaire unit mounted against the back wall of the liner. Operating with a low temperature difference between the unit and cabinet interior, this unit is designed to maintain predetermined temperature and humidity conditions. No manual defrosting is necessary.

The white Dulux finished cabinet is built of heavy gauge steel with welded overlap joints sealed to keep out moisture. Walls, top, bottom, and doors are insulated with fibrous glass 3 in. thick.

Vertical door handles are equipped with padlock rings. Hinges are matching and partially concealed.

Net weight of the refrigerator is 360 pounds.



### Distributors To Handle Pacific Window Cooler

CLEVELAND — Concurrent with the introduction of a new model window-type room air conditioner, Pacific Mfg. Co. here is departing from its policy of selling direct to the dealer by setting up distributors in principal cities, H. C. Troth, president, announced.

"We have concluded that we can get more effective coverage through distributorship representation," Troth explained.

The new air conditioner is known as Model 60W. It employs a blower-type room air fan and the Servel Supermetec condensing unit.

### Appliance's 2 Agitators Mix Drinks, Liquefy Food

OAKLAND, Calif.—An appliance that not only mixes food or drink, but also liquefies fresh fruits and

vegetables is now being turned out by Western Die Casting Corp. here.

Equipped with two agitators (a Liquefier and a Swirlator) the "Mix-All" is available in a white enamel finish (for home use) or black enamel (for commercial use).

The Liquefier on this three-speed mixing unit can be utilized for the preparation of vegetable cocktails, fruit drinks, frozen drinks, date beverages or cream soups.

Companion piece to the Liquefier is a stainless steel rotating part with attached coils and paddles. Designed to blend and aerate ingredients for thick drinks such as malts, milk shakes, frappes, and egg-nogs, this agitator is known as the Swirlator.

Both the Liquefier and the Swirlator fit down into a one-quart cylindrical "Blendabowl" which sits atop the large enamel base of the "Mix-All."

### New Lau Blower Installs In House with Low Roof

DAYTON, Ohio—Newest addition to the fan line of Lau Blower Co. here is the "Rancher," a complete package unit designed especially for buildings or dwellings with low-pitched roofs.

A fire-resistant sheet metal plenum, "air-tight" cushion seal, and sealed bearings for all moving parts are listed as features of the fan, known as Model R-303.

The "Rancher" has four 30-in. blades and is powered by a 1/2-hp. motor. It is mounted horizontally to discharge upward and outward, is belt-driven, and carries a free air delivery rating of 6,900 c.f.m.

## AMERICAN Brings You

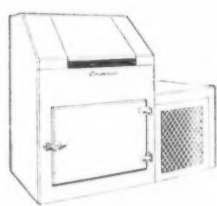
### 2 Sales Boosters

#### The New 20 Tray ICE CUBE MAKER

No need to buy ice—get an Ice Cube Maker—pays for itself quickly in low cost cubes. Answers the need for storage and production in one unit. This new AMERICAN creation is a top quality product.



SPECIFICATIONS: Production capacity—20 quick release trays—14 cubes each. Storage capacity—60 lbs. or 1 1/2 bushels ice cubes. Available with or without compressor unit. High baked crinkle tobacco brown finish, stainless steel disappearing type service door. Heavily coiled and insulated—vapor sealed, rust resistant treated. Outside dimensions: Height 38 3/4", width 27", depth 21" less door. Compressor housing 16" high, 18" wide.



#### The Arid-Air 7 Case BEVERAGE COOLER

A self-contained dry cooler with centrifugal blower type fan and sealed unit. Beautiful white baked Dulux finish. Portable, equipped with casters, is ideal for service stations and stores. Outside dimensions: Depth 40", Width 28", Height 38".

DEALER INQUIRIES INVITED

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LATEST BALLY SALES SUCCESS...  
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### "GOLDISPLAY"

THE 51 INCH ALL-PURPOSE DISPLAY CASE  
WITH COMPRESSOR BUILT IN

Ideal for RESTAURANTS • DRUG FOUNTAINS  
HOTELS • FLORISTS • BAKERIES • TAPROOMS  
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PLUS THESE OTHER FAMOUS SALES BUILDERS  
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Bally REACH-IN COOLERS Bally DRY-BOTTLE COOLERS  
Bally DOUBLE DUTY CASES

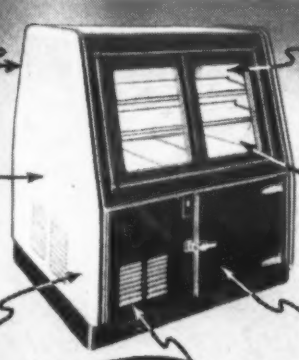
#### AUTHORIZED BALLY CASE DEALERS

- Are associated with one of the great names in the industry.
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- Have an exclusive franchise.
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DISPLAY FRONT  
OF 3 PIECES  
1/4" MIRROR QUALITY  
PLATE GLASS

ACID-RESISTANT  
PORCELAIN  
INTERIOR & EXTERIOR

4" ARMSTRONG  
INSULATION



FLUORESCENT LIGHTS  
AT TOP OF CASE AND  
ALSO UNDERNEATH SHELF

RUBBER  
SLIDING DOORS  
GLAZED WITH 3 GLASSES

8 CUBIC FT.  
STORAGE SPACE  
WITH AUTOMATIC LIGHT

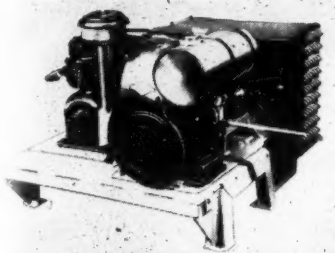
1/4 H.P. HEAVY DUTY  
COMPRESSOR  
CONNECTED WITH  
FLEXIBLE TUBING

**BALLY CASE & COOLER CO.**

MAIN OFFICE & FACTORY  
BALLY, PENNA.



## What's New (Cont.)



### Reco Offers Gas-Powered Condensing Unit Line

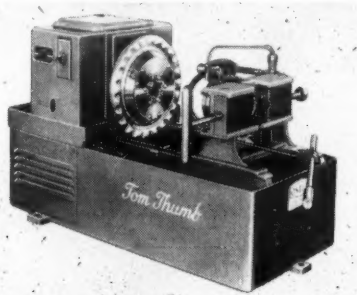
PHILADELPHIA—Reco Products Division here is now offering a complete line of gasoline engine driven, "Freon-12" air and water cooled condensing units. The units are available in sizes from ¾ to 10 hp.

Primarily designed for the export trade, development of the units came about as a result of the demand for this type of unit for operation of the Reco bulk ice maker. The gasoline engine drive was selected using a ratio of two BHP to one BHP of electric motor drive as normally furnished with the unit. Engine speeds vary from 1600 to 1900 r.p.m. and are operated far below maximum speeds and horsepowers called for by the manufacturer.

The smaller units are equipped with single-cylinder, four-cycle engines; the intermediate sizes with similar two-cylinder engines while the 5, 7½, and 10 hp. units are equipped with Crosley Cobra four-cylinder engines complete with electric motor starter and generator.

All units are equipped with automatic centrifugal clutches and reverse acting pressure switches which automatically shut down the engine. Larger units are available with automatic starting device.

Because it is almost axiomatic that where there is no electric power overseas there is usually an acute scarcity of water, Reco is manufacturing the complete line up to and including the 5-hp. size in both air and water cooled models. The 7½ hp. and the 10-hp. models are only available in water cooled types.



### Pipe or Stud-Threader Can Be Made Portable

CLEVELAND—Pipe or studs as short as 2½ in. can be threaded on

one end using Oster Mfg. Co.'s "Tom Thumb" No. 582 threader.

The machine, which is designed for bench use, can be rendered portable by means of a steel-stand equipped with 16 in. wheels. Oster supplies the mobile stand as an "extra."

Specifically, this electrically powered pipe and bolt threader has a normal range of ¼ in. to 2 in. pipe, but when adapted, can handle pipe of ½ in. For larger sizes (2½ in. to 8 in.) a special drive shaft is necessary. According to the manufacturer, pipe in the 2 in. size having nipples as short as 3½ in. can be threaded on both ends without using a nipple chuck.

On the front of the machine a new "Spinfast" chuck grips or releases pipe readily, thus precluding need for a chuck wrench. Rear chuck has three quick-acting plain jaws to do away with loose bushings, out-board pipe supports, and irregular threading.

An opening in the top of the die-head enables the user to watch the thread as it is cut. The die-head drops chips out through the bottom and can slide out of the way for the cut-off operation.

Oster Mfg. Co., located at 2085 E. 61st St., here, adds that any individual segment of the long-lead dies can be replaced. Integral with the die-head is the reaming device mounted on the front for close work. The cutting device is set on rollers.

Instead of being pushed forward, the carriage can be pulled forward on all steel ways through the use of a new type lever feed. A thread length gauge insures standardized cutting.

### Hinge, Fastener, Gasket Help Insulate Cold Storage

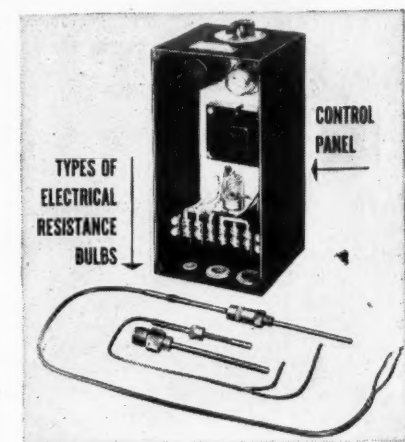
HAGERSTOWN, Md.—A new type cold storage door for sub-freezing and sharp freezing operations, provided with positive means to produce a uniformly tight seal is announced by Jamison Cold Storage Door Co. here.

The uniformly tight seal is obtained through three exclusive, patented, features:

(1) The door hinges, combining self-adjustment with screw regulated spring pressure, automatically seats door gasket. To compensate for gasket wear the spring pressure can be altered by simply turning an adjusting screw.

(2) The two-point fastener maintains a uniform sealing pressure and requires minimum effort to close and open door. Operation of the fastener is completely automatic and is adjustable through the medium of an exterior, easily accessible adjusting screw.

(3) The gasket, developed especially for use on this door, is made of sponge rubber encased in a water impervious skin. It is applied to the



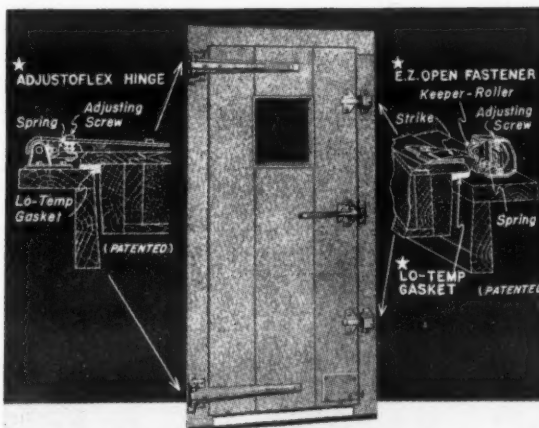
### New Temperature Control Has 3-Second Response

WEST ORANGE, N. J.—A new temperature controller, developed by the Instrument Division of Thomas A. Edison, Inc. here, uses a single electronic tube with an electrical resistance type bulb for thermal pick-up and is of the on-off type, a company report states.

The use of the resistance bulb permits location of the sensing element at a point remote from the control panel and eliminates the necessity of thermal compensation, it is stated. This device, which is non-indicating, may be used to control temperatures to very close tolerances in various solids, gases, or liquids.

Units are available to cover the temperature range from -100° F. to 1200° F. and are adjustable within a temperature range of several hundred degrees.

Supply voltage may be 115 or 230 volts 50-60 cycle alternating current.



full overlap of the door and not only surface seals the door against the frame-casing, but plug-seals the space between the door and frame.

Front and back operating handles are provided. The design of the fastener is such that no connection between the front and back handles is required.

The front, edges, and frame-casing of the door are metal clad. Possible deterioration because of moisture precipitation is eliminated and sanitary conditions maintained.

Load capacity is 30 amperes at 115 volts, 20 amperes at 230 volts. Accuracy of the controller is independent of usual voltage variation. Normal response time is claimed to be under three seconds, due to the patented bulb construction of the control.

A 5 x 5 x 10-in. control panel, weighing less than 8 lbs., complete, is furnished and is provided with conduit knockouts and a rugged terminal board. This may be located at any convenient place and at considerable distance from the temperature zone.

**PERFECT VACUUM DEHYDRATION CONTROL**  
with **TELEVAC**

REG. U. S. PAT. OFF.

### TEN TELEVAC FEATURES

- Eliminates "wet" units.
- Complete record of each dehydration cycle.
- Accurate indication of dry point.
- Gauges take 50 PSI pressure without harm.
- Checks vacuum pump efficiency.
- Reveals "leakers" early in cycle.
- Increases production.
- Multi-point recording available.
- No recalibration of gauges.
- No batteries—line operated.

**Partial List of Televac Users:** Philco Corporation  
Tecumseh Products Co. Universal Cooler Division  
International Harvester Co. York Corporation

### ALSO REPRESENTING:

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## GEORGE E. FREDERICKS COMPANY

BETHAYRES PENNSYLVANIA  
HIGH VACUUM TECHNICIANS • CONSULTING ENGINEERS

**EYE CATCHER**

Outstanding in the display case field, the SHERER Model 500 offers food merchants—

**WORKABILITY**—easy to work out of

**VISIBILITY**—customer sees all the display

**CAPACITY**—3 platters deep on one shelf

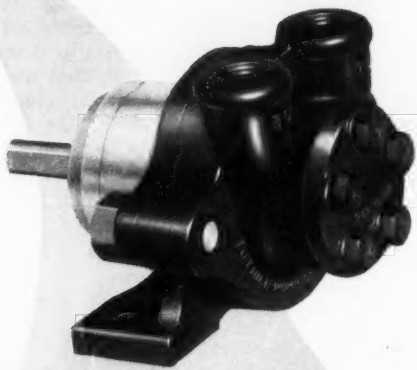
**BEAUTY**—gracefully rounded contours

It has everything expected in a good meat case.

**SHERER REFRIGERATED MERCHANDISERS**

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## A COMPACT ANSWER TO YOUR LUBRICATION NEEDS

Compact in size and  
mechanically sealed  
for quiet, leakfree,  
low-cost operation,  
Tuthill Model L

pumps provide a practical answer to your pressure lubrication requirements. Capacities up to 3 g.p.m. in wide pressure ranges. Other models include stripped pumps and automatic reversing pumps. Write for details on Tuthill pumps for pressure lubrication.

**TUTHILL PUMP COMPANY** • 939 East 95th Street, Chicago 19, Illinois

## ON THE SPOT

By C. Dale Mericle

### More About Evansville As Refrigeration Center

Last week we set out to talk about Evansville, Ind., and its claim to being the "Refrigeration Center of the World." We recently spent a week in that thriving town and came back convinced that probably was a valid claim. After all, there are five important manufacturers there who turn out approximately a fourth of the nation's household refrigerators. And thus far, no other city has voiced any dispute.

Fortunately, visiting Evansville included the privilege of touring all the refrigerator plants, which proved very educational for me as to how things are being done today and gave me a few hints of what might be expected in the future.

### Servel Is 'Daddy' Here

Largest of the refrigeration plants in Evansville, and likewise the oldest, is Servel, Inc. It is also the most diversified, producing the famed Servel gas absorption type refrigerator, a gas-fired absorption type year-round air conditioner, electric condensing units including the well-known Supermatic line, and in addition gas-fired automatic water heaters.

Occupying more than 2,000,000 sq. ft. of floor space and employing some 7,200, Servel's growth since its establishment in 1926 has been tremendous.

A complete "Cook's Tour" through its vast manufacturing, engineering, and research divisions is an exciting experience, but I soon realized that I should have done considerable road-work before attempting it.

Under the able and cooperative guidance of some of the Servel staff I made it, thanks to Walter Wood, publicity manager; Walter Kuenzli, cabinet engineer; Dr. N. E. Berry, director of research, and John Zubrod, manager of application engineering in the Electric Division.

There are several buildings in the Servel setup and they cover several city blocks. Through the years the company has grown, somewhat like Topsy, and they're still pretty crowded in spots. But that doesn't keep them from turning out a terrific amount of top-quality products. There are now well over 2,000,000 Servel gas refrigerators in the field, not to mention all the other products.

That output figure on the Servel refrigerator is very interesting, we think, considering that it's quite a job to make these boxes. Their operation is incredibly simple, but part of the manufacturing process involves perfect welding of all the joints in the steel tubing and connections.

### Watch the Electrolux

Servel, intimated Dr. R. S. Taylor, chief engineer in charge of the gas division, figures to do something in the not too distant future to simplify that welding operation. This, incidentally, should drop the cost, too.

The groundwork for my visit to Servel was laid by Wood, the publicity man, who took me through the complete household manufacturing operations. There are a lot of interesting things in that connection, plus the more or less conventional stamping and welding operations that go

into the manufacture of the usual refrigerator cabinet.

One thing in particular along the household production line caught my eye, and so I was given a full explanation. This was a special air conditioned room through which pass plastic-coated wire shelves. Here an electrostatic setup is employed to provide as near perfect a finish as possible. But here's the complete story as explained by Harold R. Lyon, organic finishes engineer under A. C. Stuart, assistant chief engineer.

"For several years we have been trying to get away from the hot tin-plated shelf we used in almost all our prewar models and after much research our new process of plastic coating was developed.

"As part of this development, we set up high requirements for quality and performance. For example, in the field of moisture resistance, the new finish must stand up for 1,000 hours instead of the prewar 24 hours under conditions of 100% relative humidity at 110° F. with no evidence of breakdown."

Starting out as a welded bar frame of cold-rolled steel, the shelf is pickled in acid to remove all impurities, and then is electro-plated with zinc. Next the shelf gets a Bonderite film coating and afterwards its first coat of plastic, which is thermally set at a temperature of 320° F. Final step is a finish coat of plastic which is thermally set at 300° F.

### Now It Gets Tough

Now comes the tough part. The most economical way of applying the finish coats, of course, is by dipping, but after dipping all excess material tends to drain off and leave a number of little "tears" or bumps at the lower end of the shelf as it hangs on a conveyor rack.

If left there, the "tears" would not be thoroughly hardened in the baking ovens and would soon break off, giving the shelf a poor appearance and an open spot to start rusting.

Electronics has come to the answer  
(Continued on next page)

## The Governor of Colorado invites You



WILLIAM LEE KNOUS  
GOVERNOR

To American Industry:  
Look long at Colorado.

A vigorous, young state, awake to its opportunities yet aware of its needs, will challenge your attention and stimulate your imagination.

Natural resources we have in abundance with the water and power for their development. Our labor force is highly adaptable, our markets are rapidly expanding.

Our health-giving climate, our scenic setting make Colorado a soul-satisfying home for you and your families.

And most important — we know where we're going! Our leaders in business, industry, agriculture and education, through their Resources Development Council, are charting a course toward a sound, stable future for our people.

Look long at Colorado — it offers you much!

*Lee Knous*  
Governor



Lee Knous

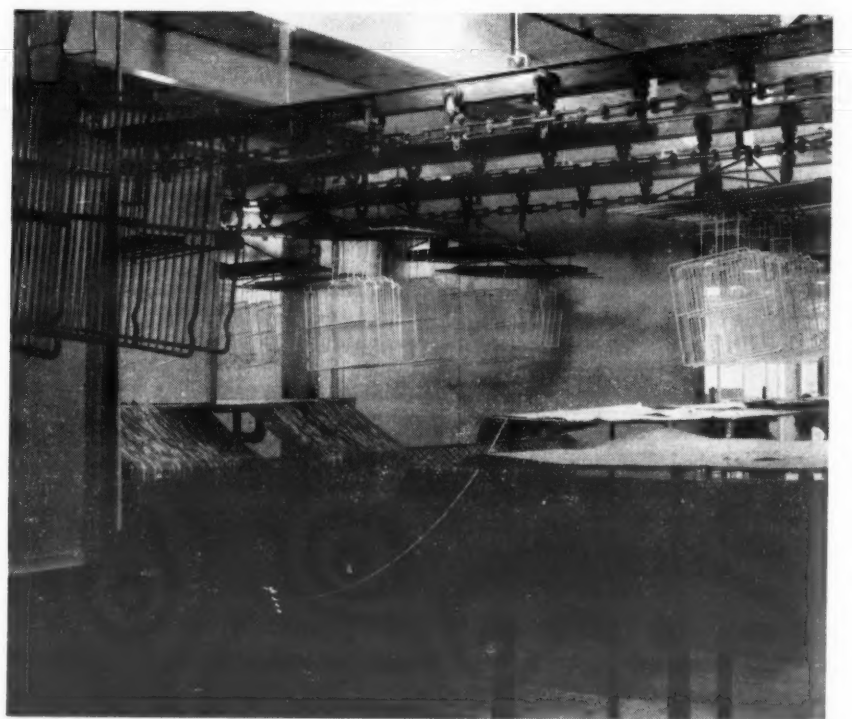
\* One of a series of advertisements based on industrial opportunities in the states served by Union Pacific Railroad.

Unite with Union Pacific in selecting sites and seeking new markets in California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, Wyoming.

\*Address Industrial Department, Union Pacific Railroad  
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**UNION PACIFIC RAILROAD**  
*Road of the Daily Streamliners*

### Something New -- But Not a Wrinkle



Every day some new use is being found of electronics and plastics, and in this room at Servel's factory the two are combined. Plastic-coated refrigerator shelves here pass over electrostatically charged grids at lower right which pull away the "tears" from the bottom of the shelves, leaving a smooth round finish, say the engineers.

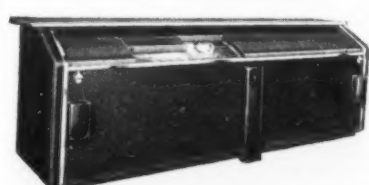
### SOME TERRITORY NOW AVAILABLE



Walk-ins that grow  
with the merchant's business



Reach-ins  
with coiling that  
is different



A Dry Beverage  
cooler with  
quicker cooling



**THE C. SCHMIDT CO.**  
CINCINNATI FOURTEEN OHIO



## ON THE SPOT

By C. Dale Mericle

(Continued from preceding page)

in this connection, however. The conveyor racks containing the just-dipped shelves run into the special room where the air is charged with 85,000 volts of static electricity. As the shelves pass over the electrically charged grids in the room, the tears fall away, leaving the entire shelf smooth and ready for the thermal setting.

All in all, it's quite a setup.

There was another operation, too, that struck me as most interesting. This was over in the all-year air conditioning department. Here one of the great wartime scientific developments which helped make possible the atomic bomb has been adapted for peacetime use. It's the mass spectrometer, and Servel uses it for leak detection in the manufacture of its absorption air conditioner.

Not only does this device permit a much more accurate method of leak detecting, but it has reduced inspection time on the unit from days to a matter of hours and has cut the plant testing area from 3,000 sq. ft. to less than 500 ft. of space.

Servel, which made one of the first peacetime applications of the mass spectrometer, had previously detected leaks in the air conditioner by keeping air under pressure in the equipment for at least 24 hours. A drop in pressure indicated a leak somewhere, and to locate it the unit was dunked in water so escaping bubbles would show the source of the leak.

### Leak Testing the New Way

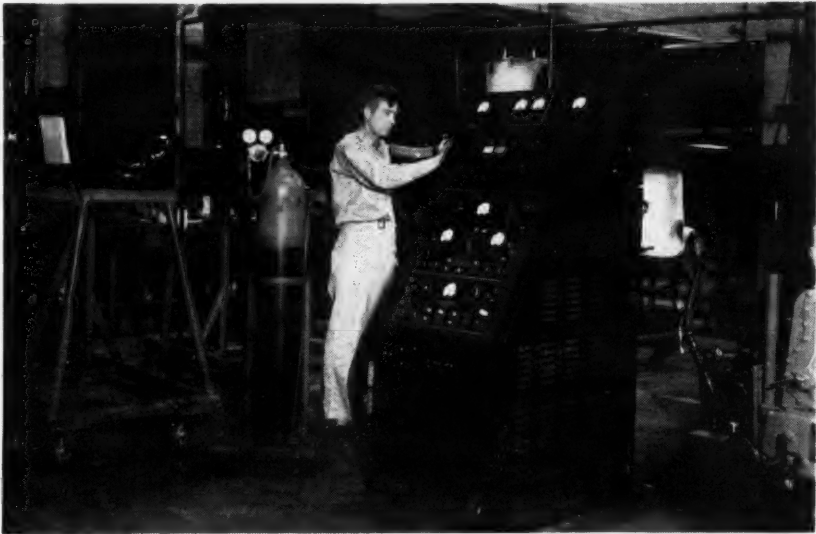
With the new method, the air conditioning equipment is enclosed with a covering or hood and surrounded with an atmosphere of about 15% helium and the rest air. The equipment is then evacuated and connected to the electronic mass spectrometer.

If helium leaks into the evacuated equipment, it will be drawn into the leak detector and the leakage will be indicated by a suddenly increased reading on the instruments of the panel board.

To determine the location of the leak, a jet of helium is sprayed around the pipe joints and other likely spots, and when the jet passes over a leak, its location will be shown by an increased reading on the indicating instruments.

The operation is impressive, and it

## From A-Bombs to Air Conditioning



Developed during the war for atom bomb production, the mass spectrometer was soon applied to peacetime use by Servel for leak testing of its absorption air conditioner. It's cut this job from a matter of days to hours, and has saved a lot of plant space.

makes leak detection accurate and quick, but just exactly what happens inside the leak detector will probably remain a mystery to yours truly for years to come.

After this session I was ready for lunch with Walter Kuenzli and John Zubrod, and afterwards they courteously took some of their valuable time to drive me up to Reitz Hill, a high point on the bank of the Ohio River, which gives a good view of the city and its riverfront. Way off in the distance can also be seen the towering top of the bridge just east of Evansville that connects Indiana and Kentucky.

Then back to the Servel plant to see a lot more of it and meet some more of the splendid people who make it the fine plant that it is. Part of the afternoon was spent with the boys in the Electric Refrigeration Division, which turns out a great variety of condensing units, including belt-driven models and the direct-driven sealed Supermetic line with an over-all capacity ranging from 1/4 to 3 hp.

Here we met and chatted with C. E. Ploeger, chief engineer, and Henry Dueker, his assistant, who head up the engineering for the electric division.

One special feature in the production of Servel's electric refrigeration units, of course, is the numerous operations involved to achieve that mirror-like, smooth, Superfinish on bearing surfaces. Machining of the

crankshaft, they told me, takes a total of 27 operations, followed by rigid inspection tests.

Other people we encountered along the way included O. B. Lance, promotion supervisor of the Electric Refrigeration Division, and O. J. Dail, general superintendent of the division.

When we ran into Dail he was arranging to take a plane out of Evansville at 3:45 a.m. the next morning. What an hour to start for anywhere except home, but those Servel people let no grass grow under their feet.

One of the most interesting parts of the visit to Servel was a lengthy chat with busy, genial Jack Knighton, general sales manager for the company. He was formerly sales manager of Servel's gas air conditioning division.

### New Applications Seen For the Air Conditioner

Although he readily admitted that Servel has been handicapped in promoting this conditioner because of the gas shortage throughout the important market area of Northeastern United States, he intimated that Servel has a lot of things on the fire for this unit which may begin to pop shortly.

For one thing, of course, he pointed out, that gas shortage is not going to last forever, and as soon as the supply becomes more plentiful, Knighton confidently expects conditioner sales to boom. In the meantime the company is continuing production and research on the unit.

Another angle that Servel is promoting at the present time, Knighton said, is the application of the unit within the central steam-heating districts which several cities have in their downtown areas.

With this application steam would be substituted for gas as the main source of heat for operating the absorption refrigeration system during the cooling season. Steam, of course, would supply the heat in the winter. And no gas would be necessary. In the standard design, gas is used to produce steam which actuates the cooling system for comfort cooling and in the winter the steam is diverted to the heating coils contained with the unit.

Some electric utilities have been pleased to learn, he said, that the electric load on the air conditioner is just about as great as the gas load, at least as far as revenue is concerned. After all, there are fans to be driven and controls to be operated.

And what's more, that's a steady, year-round load that present residential power lines and the average home wiring can handle quite nicely. Herein is a possibility that will bear watching for future developments.

My lengthy tour of Servel was wound up with a very good look around the engineering department under the guidance of Walter Kuenzli. This was fairly thorough and highly interesting, emphasizing particularly what great pains a big manufacturer of refrigerators and refrigeration equipment puts behind this product today.

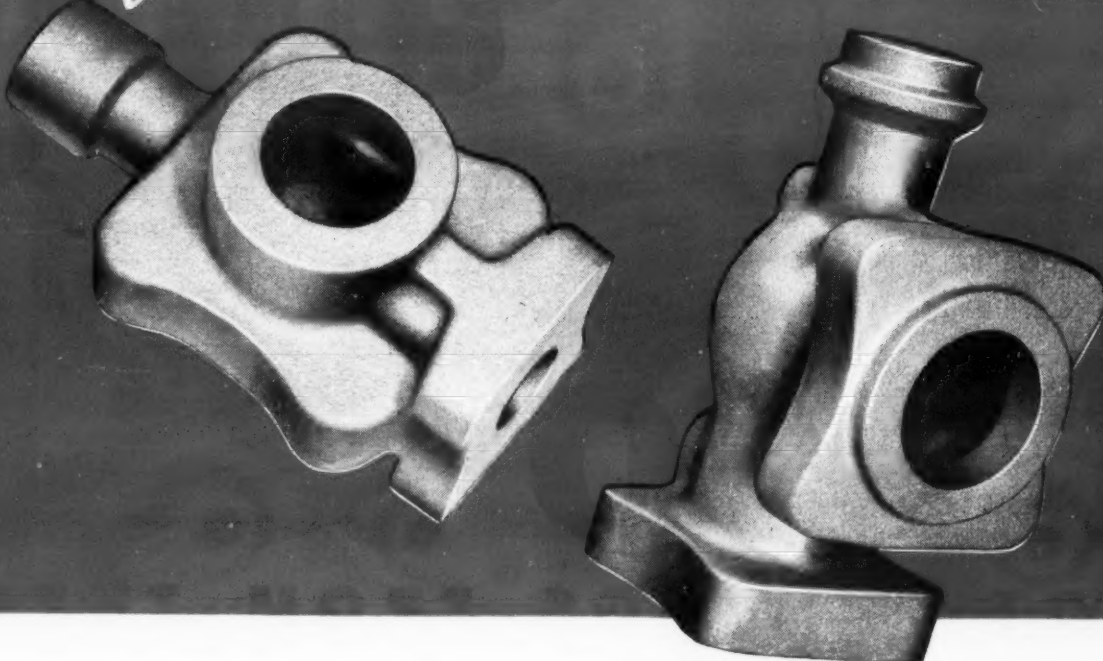
This was further pointed up when Carl H. Nauert of the cabinet engineering department took me over to the research laboratories headed up by Dr. Berry, director of research, who reports to Dr. Wm. R. Hainsworth, vice president in charge of engineering.

The research group has reason to be pleased with their spacious new laboratory. Here intensive and often lengthy research projects concerning all the Servel products are conducted. Much of the research department's activities today are concentrated on the air conditioner, as might be expected.

Final event on that very crowded day "doing" Servel (and let me say it can't be done properly in a single day) was an enjoyable discussion at dinner with Wendel McEwen of the air conditioning sales department.

(To Be Continued)

## for REFRIGERATION VALVE BODIES



## EATON PERMANENT MOLD GRAY IRON CASTINGS

Free Machinability  
Dense, Porous-Free Structure  
No Leakage Under Pressure  
Ability to Take Mirror Finish  
Free From Distortion

These are qualities which recommend Eaton Permanent Mold Gray Iron Castings for literally hundreds of applications in the Refrigeration field. Millions of Eaton Permanent Mold Gray Iron Castings are used annually for such critical parts as valve bodies, pump bodies, cylinder

heads, connecting rods, pistons, crankshafts, cylinder blocks, bearing retainers, pump heads, and many others.

Eaton Foundry Division engineers will be glad to discuss the application of Eaton Permanent Mold Gray Iron Castings to your product.

**NEW BOOKLET** • Send for your copy of the new, illustrated booklet, "The Eaton Permanent Mold Process," which describes the Eaton Permanent Mold Machine, and the Permanent Mold Process. It also includes pointers on designing Gray Iron Castings to be produced by the Eaton Permanent Mold Process.



THE EATON PERMANENT MOLD MACHINE IS A SYMBOL OF THE QUALITY OF GRAY IRON CASTINGS PRODUCED BY THE PERMANENT MOLD PROCESS.

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MANUFACTURING COMPANY  
FOUNDRY DIVISION

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ONE UNIT

**THAWZONE**  
PATENTED  
The PIONEER FLUID DEHYDRANT

So LITTLE does so MUCH!

**150**  
REFRIGERANT  
UNITS  
(IN HERMETIC UNITS 1 TO 300)

To the engineer who knows his refrigerating plants, the above is a graphic way of illustrating one of THAWZONE'S important features in taking care of moisture problems.

The 1-oz. bottle treats \*8 lbs. of refrigerant, \$1.00  
The 4-oz. bottle treats \*32 lbs. of refrigerant, \$3.00  
The pint bottle treats \*128 lbs. of refrigerant, \$10.00

\*This figure is doubled for hermetic units.  
See how little it costs to use.

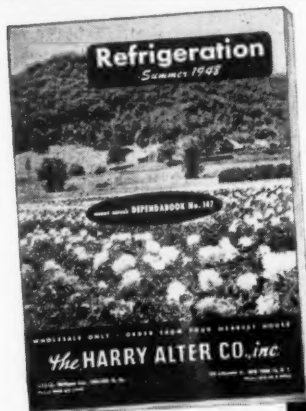
A TINY AMOUNT → A BIG JOB ← SMALL COST

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**Maximum EFFICIENCY • Minimum ATTENTION**



Precision manufacture gives Larkin refrigeration products life-time top performance and lasting fortitude. Made by the originators of the patented Cross Fin Coil, Larkin is the recognized leader in precision manufacture of Larkin Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Air Conditioning Units—Instantaneous Water Coolers—Evaporative Condensers—and all other equipment factors used in dependable commercial and industrial refrigeration.



**LARKIN COILS** 519 MEMORIAL DRIVE • S.E. • ATLANTA • GEORGIA

**'Kek' Claims as Heating Cure Restrained by FTC**

WASHINGTON, D. C.—The Federal Trade Commission has ordered Kenite Laboratory, Inc., to stop claiming that its product called "Kek" is an effective cure for defective heating.

Ruling that Kenite has violated provisions of the Federal Trade Commission Act, the agency also ordered the laboratory to "cease and desist" from representing:

1. That the product can be depended upon to separate the foreign matter from the water in a boiler.
2. That the use of the product will increase steam pressure in a boiler or heating system, create dry steam, or cause an abundance of steam to fill and heat radiators, or that it will otherwise eliminate defective steaming conditions in cast iron or steel boilers when any of these conditions are caused by mechanical defects in the boilers.
3. That the product will completely remove the scale from cast iron or steel boilers.
4. That the product will correct the inefficiency of a steam heating system as indicated by its inability to raise steam pressure, water leaving the boiler when the pressure rises, hammering in pipe lines and radiators, water in radiators, ejection of water by air valves, or excessive fuel consumption when any of these conditions are caused by mechanical defects of the boiler or heating system.
5. That defective steaming conditions are prevalent in cast iron or steel boilers.

One of a series from

**The KEY to AIR CONDITIONING**

by James J. LaSalvia

**Cooling Load (Cont.)**

**FACTORS USED TO CALCULATE HEAT GAIN**

The cooling load calculation is made up of the various factors shown below:

1. *Normal heat transfer* (sensible heat only) through windows, skylights, walls, partitions, floors, ceilings, and roofs.
2. *Solar radiation* (sensible heat only) through windows, skylights, outside walls and doors, and roofs.
3. *Heat given off by the occupants within the space* (sensible and latent heat).
4. *Heat given off by ordinary electric lighting within the space* (sensible heat only).
5. *Heat given off by electric appliances within the space* (sensible and latent heat). Includes motors, urns, hot plates, ranges, and toasters.
6. *Heat given off by steam appliances within the space* (sensible and latent heat), such as urns and steam tables.
7. *Heat given off by gas appliances within the space* (sensible and latent heat), such as urns, steam tables, ranges, and hot plates.
8. *Heat given off by the supply fan motor* whether inside or outside of space (sensible heat only).
9. *Heat picked up by the cold air flowing through ducts*, when such ducts are outside of air conditioned space (sensible heat only).
10. *Heat brought in to the space by infiltration* of outside air or controlled ventilation (sensible and latent heat).

Heat as used in air conditioning is in two forms, namely, "sensible" and "latent" heats. It is important that these two kinds of heat be differentiated in this work at all times.

**NORMAL HEAT TRANSFER**

The normal heat transfer is taken through windows, skylights, walls, partitions, floors, ceilings, and roofs. This is the normal heat transfer between the outside design dry bulb temperature and the inside design dry bulb temperature.

The following formula is used to

figure the amount of heat:

$$H_t = A \times U (t_o - t_i)$$

Where:

- $H_t$  = Heat transmitted in B.t.u. per hour.  
 $A$  = Net area of glass or wall, etc. in sq. ft.  
 $U$  = Coefficient of transmission of glass or wall in B.t.u. per hour per 1° F.  
 $t_o$  = Outside temperature of glass or wall in degrees Fahrenheit.  
 $t_i$  = Inside temperature of space in degrees Fahrenheit.

**EXAMPLE**

Assume:

- $A$  = 1,000 sq. ft. of wall.  
 $t_o$  = 95° F. dry bulb temperature.  
 $t_i$  = 80° F. dry bulb temperature.  
 $U$  = .34 for 12 in. brick wall with metal lath and plaster.

Therefore:

$$\text{B.t.u./hour} = 1,000 \times .34 (95^\circ - 80^\circ)$$

$$\text{B.t.u./hour} = 5,100$$

Assume that the above  $t_o$  and  $t_i$  were held the same and  $A$  = 1,000 sq. ft. of glass.  $U$  for single glass is 1.13.

$$\text{B.t.u./hour} = 1,000 \times 1.13 (95^\circ - 80^\circ)$$

$$\text{B.t.u./hour} = 1,000 \times 1.13 \times 15^\circ$$

$$\text{B.t.u./hour} = 16,950$$

The following points should be considered in calculating the normal heat transfer:

1. Do not figure any heat gain through any wall, partition, or ceiling, if such wall, partition, or ceiling is adjacent to a space which is already air conditioned, or is to be air conditioned.
2. Do not figure any heat gain through floor when the floor is directly above the ground.
3. Where possible, insulate roofs with cork or other efficient insulating material. This will lower the transmission factor  $U$  and will require less refrigeration. It is generally cheaper to buy insulation than refrigeration equipment.

(To Be Continued)

**NIBCO**

**WROT FITTINGS FROM TUBES**



Precision-formed from a single tube—without seam or weld—the NIBCO WROT Tee has a smooth interior finish which insures a perfect joint. In addition to tees the NIBCO line of wrot copper fittings includes elbows, couplings, return bends, adapters and unions—everything you need to go with the pipe. All are formed from tubes by the patented NIBCO method. Precision-made to fit, they speed the job and make a quality installation with economical lightweight copper tubes. It will pay to standardize on NIBCO fittings. Mail coupon for catalog.

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## Reed Gives Maintenance, Replacement Principles for Compressor Shaft Seals

### Points to Dirt as No. 1 Enemy

SAN FRANCISCO — Failure of compressor shaft seals to function properly may not be so critical a refrigeration problem as it was 10 or 15 years ago, but it still can mean a lost refrigerant charge and damage to the system, so service engineers should not neglect proper seal maintenance and repair, Paul Reed, national educational director of the Refrigeration Service Engineers Society, told the recent Refrigeration Educational Conference here.

#### 'DO'S & DONT'S'

In seal maintenance and replacement, Reed listed the following principal "do's" and "don'ts."

1. Keep seals clean.
  2. Check compressor oil level.
  3. See that the drive belt is not too tight.
  4. Test for seal leaks with a halide torch while the compressor is running, and also when it is idle.
  5. Don't loosen the seal, or you're likely to cause a leak.
  6. In installing a replacement seal, remove stuffing grease but put a little oil on the nose and ring surface.
  7. Before installing a replacement, clean it, but don't wash it with carbon tetrachloride.
  8. Use only the oil recommended by the manufacturer.
  9. Keep the entire system clean.
- Dirt is the No. 1 enemy of compressor seals, Reed pointed out. Silicate and carbons act as abrasives and cut the seal surfaces. Thus it is important that the oil in the crankcase be kept as clean as possible, and it follows that the whole system must thus be kept clean.
- Oil film is needed on the sealing surfaces. A low oil level in the compressor crankcase endangers seal lubrication and thus proper functioning of the seal. Sometimes seal leaks

can be corrected merely by bringing up the oil level, Reed pointed out.

Seal squeaks, often very annoying to the user, can usually be traced to leak of lubrication or the seal nose may get "cocked" so that oil is forced out.

In some cases, worn or ineffective seals can be re-lapped so that they will once more function properly. Re-lapping, however, must be done with great care and must be properly cleaned. Reed said that he did not recommend cleaning with carbon tetrachloride.

Separate blocks should be used for bronze and steel parts. With bronze parts, emery should not be used. If steel face is cut rather deeply, don't try re-lapping because the hard face isn't very deep.

#### FAVORS LAPPING WITH SANDPAPER

Favored method of re-lapping is with wet or dry sandpaper.

As the bronze nose runs on the steel shaft or ring, the two tend to form concentric ridges and grooves, especially if there is a little dirt present that embeds in the soft bronze but cuts the hard steel.

Reed advised never to put a seal back together that has been running for sometime, for even though sealing faces may look smooth, there are actually tiny grooves worn and it is virtually impossible to get the two faces back together exactly as before they were taken apart, and although they did not leak before, they will almost invariably leak if put back together. Each face should be lapped lightly before reassembling.

Reed described the various types of replacement seals, and explained their widespread use in replacement of worn or inoperative seals.

## 1/4 of Families To Exceed Income To Buy Durables

WASHINGTON, D. C. — Though one speaker, a Federal government official, told the American Marketing Association here recently that people were spending \$3 billion less for durable goods than had been expected, another asserted that at least a quarter of all family spending units will exceed their incomes this year in order to replace worn out durables and to meet rising living costs.

Milton Gilbert, chief of the national income division, office of business economics, Department of Commerce, said that though spending for durables was not up to expectations, post-war food expenditures were \$8 billion higher than had been anticipated.

"The high cost of food is undoubtedly taking an excessive share of consumer income," he asserted.

He expressed the opinion that the current trend is toward spending and away from saving.

Duncan McC. Holthausen, in reviewing the third annual Federal Reserve System survey of consumer finances, noted that while 25% of U. S. families spent more than they earned in 1947, the remainder were saving less than they had in the previous year.

In spite of this, according to the survey, of 48,000,000 spending units, 2,500,000 more were earning in excess of \$5,000 a year in 1947 than in 1946. And 2,500,000 others had moved up from the below \$3,000 per year income group. Half of all families reported greater incomes in 1947 than in 1946.

## Peterson Will Represent Cecil Boling In Phila.

NEW YORK CITY—H. P. Peterson, formerly chief engineer for Bush Manufacturing Co., has been appointed Philadelphia representative for the Cecil Boling Co. here, Cecil Boling has announced.

In his new position, Peterson will handle both Bush and Heat-X-Changer products. His temporary headquarters will be in Wayne, Pa.

Peterson is a member of the American Society of Heating and Ventilating Engineers and has served on the standards and heat transfer committees of the American Society of Refrigerating Engineers.

Recently he was a consultant on refrigeration at Manchester, Conn.

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Everything and anything in parts and supplies shipped all over the globe. Scarce items back, new lines added...most complete stock available anywhere in our enlarged modern building. Big or little, your order gets speedy personalized attention. Thousands of satisfied customers use our dependable service to save working-hour time, energy. Write for catalog...on your letterhead...today!



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THE SUPPLY HOUSE THAT SERVES THE WORLD • Wholesale Only

**SERVICE SP PARTS CO.**  
2511-2611 LAKE STREET MELROSE PARK, ILLINOIS

#### Six Reasons Cited

## Nearly Half of 29 Failures Among Radio Builders Since August, 1947 Started Less Than 5 Years Ago

CHICAGO—Twenty-nine radio and component parts manufacturers have failed since Aug. 31, 1947, according to a report issued by the credit committee of the Radio Manufacturing Association.

Radio set makers accounted for 10 of the failures, while two more were producers of television receivers. Other failures were in these segments of the industry: communications equipment makers, 5; test equipment manufacturers, 3; recorders, 2; radio parts, 2; phonographs, 2; sound equipment, 1; motors, 1; and projection, 1, the report indicated.

The 29 firms had a total of

\$23.9 million in liabilities. It was pointed out that nearly half of these firms had entered the field within the last five years.

Extensive inventories, excessive plant facilities, unprofitable operations, inadequate distribution facilities, poor quality of merchandise, and inadequate production experience were cited by E. G. Carlson, committee chairman, as some of the contributing causes.

Since last July the same report listed financial troubles for 10 wholesalers of radio parts, with liabilities totaling \$556,000. About 60% of these had been in business five years or less, according to the committee.



**"There is really no substitute for Copper and Brass..."**

—says Halstead & Mitchell, maker of cleanable counterflow condenser

In this unique double-tube condenser for refrigeration and air conditioning work, the cooling water flows through an inner copper tube. The refrigerant flows in the opposite direction through the outer tube—also of copper. The brass header is machined from a solid brass bar and is designed to permit easy cleaning of the inner cooling tube, thus maintaining the high original cooling efficiency throughout the long life of the condenser.

Mr. Halstead writes—"Frequently we are asked

Main illustration shows HM Counterflow Condenser for 5 h.p. (5 tons) refrigerating plant—a product of Halstead & Mitchell, Pittsburgh, Pa. Immediately above, cutaway view bisects header longitudinally, revealing bolt holes for removable plate, brazed double-tube assemblies and method of channeling flow of refrigerant and coolant.

why we use copper and brass in such preponderant quantities in producing our double-tube condensers. Brass was selected for headers as a rustproof material of uniform density suitable for high-speed machining and dependable high-temperature brazing. All tubes are of copper for high thermal conductivity, corrosion resistance, long life and good brazing properties.

"In our condenser assemblies it is of prime importance that we use a combination of materials that makes possible maximum production with a minimum of leaks. In the immediate past as many as 12,000 brazed joints have been made without one leaker."

**ANACONDA**  
COPPER AND BRASS  
THE AMERICAN BRASS COMPANY  
General Offices: Waterbury 88, Connecticut  
Subsidiary of Anaconda Copper Mining Company  
In Canada: ANACONDA AMERICAN BRASS LTD.,  
New Toronto, Ont.

The Multiplex Bar Dispenser Is A "LIFETIME FIXTURE"

**DISTRIBUTORS WANTED!**

If you are in a position to handle sales, installation, and service for Multiplex Fixtures to Bars and Taverns—it is quite possible for you to add \$50,000 or more in sales per year.

**NEW MODEL 14 Multiplex**  
STAINLESS STEEL  
UNDER-BAR, SOFT DRINK  
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ONE—TWO OR THREE FIXTURE INSTALLATIONS

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- MANUFACTURES, fresh carbonated soft drinks (seltzer, cola, lemon, ginger-ale, etc.) as easily as drawing a glass of beer.
- ELIMINATES BOTTLES—SPEEDS BAR SERVICE
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**MULTIPLEX FAUCET CO. Manufacturers**  
4325 Duncan Ave. Dept. ARN-14, St. Louis, Mo.  
Manufacturers of Soft Drink Dispensers for Over 40 Years.



**CROWN REFRIGERATOR CORP.**

- STAINLESS-STEEL REACH-INS
- FARM & HOME FREEZERS
- DRY BEVERAGE COOLERS
- FULL-VISION SHOW CASES
- DOUGH RETARDERS

FACTORY and SALES OFFICE METUCHEN, NEW JERSEY

**Superior**

**VALVES, FITTINGS and ACCESSORIES**

For All Refrigeration and Air Conditioning Systems

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Write to Charles Abel, Executive Manager, THE PHOTOGRAPHERS ASS'N OF AMERICA 520 Caxton Building Cleveland 15, Ohio



### VARIED SOURCES CAN SUPPLY FREEZER DATA

Midwest Industries, Inc.  
835 Osage Ave.  
Kansas City, Kans.

Editor:

We would greatly appreciate any information you can supply us on the following questions:

1. Just what factors determine the practical efficiency of a "Quick Freez Unit?" How low a temperature should it attain and how rapidly should a cubic foot of food at 80 °F. be reduced to a temperature of 0° F. when placed in a fully functioning freezer?

2. What is the basic test of insulating efficiency of a 0° F. storage unit? How long should such a unit with a full load of food at 0° F. take to reach an internal temperature of 30° F. with its compressor shut off and the external room temperature averaging 80° F.?

GERALD HAWLEY, President

**Answer:** Many factors determine the practical efficiency of a freezer. It is generally agreed that the faster food is frozen, the better the product, but I do not recall seeing a standard set for the time of reducing a cu. ft. of food to 0° F. temperature. You may find this subject covered in some standard book on food freezing techniques, such as "The Freezing Preservation of Foods" published by

Avi Publishing Co., 31 Union Square, New York City.

On such matters as insulating efficiency, pulldown time, etc., you can get a lot of help from manufacturers of component parts for freezers, such as insulation, condensing units, and cold plates. They have worked on similar problems for other manufacturers and no doubt have some of the answers.

If you don't have lists of such manufacturers, you will find complete listings in the 1948 Refrigeration and Air Conditioning Directory which we publish, and which is now available at \$1 per copy.

### WAIT! AIRTEMP UNITS COOLED SUPERMARKET

Chrysler Corp.  
Airtemp Division  
Dayton, Ohio

Editor:

In the May 17, 1948 issue of AIR CONDITIONING & REFRIGERATION NEWS, page 21, there is a story entitled, "3-Stage Setup Cools Supermarket Crowds."

Your reporter states that the store is equipped with three 5-ton Carrier air conditioning units. These units are Chrysler Airtemp units and according to latest reports are naturally doing a very fine job.

MALCOLM H. BARD, Director of National Account Sales

### HOUSE ORGAN TO PRINT PLANNED ECONOMY FABLE

John A. Wagner, Inc.  
Fort Wayne 2, Ind.

Editor:

The front page of the June 7 issue of AIR CONDITIONING & REFRIGERATION NEWS carried an article captioned "Fun In Print." We enjoyed reading it and realize how true it actually is. We passed it on to Mr. Collinge, who is president of the G. M. Diehl Machine Works in Wabash, manufacturer of precision woodworking machinery, with the thought in mind that perhaps you would give us permission to use it in their house organ, "The Diehlcraft," a copy of which is enclosed.

Mr. Collinge suggested that we ask for permission to reproduce it. If you have no objection, we would appreciate hearing from you to this effect, and we will be glad to send you a copy of the issue in which it appears.

JOHN A. WAGNER

### DISTRIBUTION OF FREEZER EDITORIAL MUSHROOMS

Electro-Plance Distributors, Inc.  
Milwaukee, Wis.

Editor:

The guest editorial in your June 14 issue captioned "Their Minds Are Wide Open But We Won't Come In" is so excellent, that we would like to have your permission to reproduce it and mail it to our entire mailing list of approximately 1,200 dealers.

May we have your permission to mimeograph or multigraph this editorial giving suitable acknowledgment to the NEWS and to the editorial writer?

E. J. SIEGEL,  
Vice President

Philco Distributors, Inc.  
Detroit, Mich.

Editor:

Will you please advise me of the cost of 500 reprints of the editorial "Their Minds Are Wide Open But We Won't Come In" by J. E. Wilson, Jr., in the June 14 issue?

And may we also have your permission to reprint this article, if necessary, with the usual credit line, of course.

EDWARD E. STIMSON, JR.,  
Advertising Manager

Deepfreeze Division  
North Chicago, Ill.

Editor:

I must again compliment your publication on the very fine editorial by Messrs. Clary and Guild, "Great Future for Freezers—Because Users Love 'Em" in your May 17 issue.

May we have your permission to reprint this editorial for distribution to our distributors and dealers?

R. V. NEWBELL,  
Advertising Manager

### OVERSEAS FIRM SEEKS PRICES OF EQUIPMENT

Grovers Ltd.  
19 Ismail Building  
Bombay 1, India

Editor:

We shall be glad to receive prices, etc. of refrigeration equipment in stock with you.

Our imports of such equipment during the last half year exceed Rs. 100,00/-We will make some purchases from you if the prices are what may be called competitive and the goods offered are brand new.

We may, however, purchase some reconditioned equipments as well if the same are guaranteed by some institution and of course the prices reasonable. Our main interest is in condensing units, air conditioner packaged type, electric motors and copper pipe, etc.

GROVERS LTD.

### 'ONE FOOT' NETS KUDOS

Ralph Jones Co.  
4217 Wycliff  
Dallas, Tex.

Editor:

I am a devoted reader of your weekly magazine and you are certainly to be congratulated on "One Foot in the Door."

RALPH JONES

### CORRECTION

York System Gets Credit For Big Houston Job

In a story headlined "Air Conditioning Switchboard" appearing in the May 24 issue of the NEWS, it was incorrectly stated that the refrigerating machines supplying air conditioning for the new windowless Foley Bros. department store in Houston, Texas, were Carrier centrifugal compressors.

The cooling effect for the Foley Bros. installation is supplied by a York turbo-refrigeration system, chilling 180,000 gals. of water per hour. Three miles of piping provide the arteries through which the chilled water is circulated to equipment that conditions 600,000 c.f.m. of air.

### GEMCO'S HEAT PUMP USES 'MIRACULA' TRADE NAME

General Engineering & Mfg. Co.  
4417 Oleatha Ave.  
St. Louis, Mo.

Editor:

In your issue of May 31, 1948, you ran an illustrated article on the heat pump installed at Hope, Rhode Island, by the Narragansett Electric Co. In it, it was stated that "The refrigeration equipment is a 5-ton 'Freon' two-stage Gemco conditioner in the basement of the home."

In the interest of our product's name, I should like to point out that the heat pump made by General Engineering & Mfg. Co. is called Miracula. The name Gemco refers to our packaged air conditioning units and other products of this company.

We bring this matter to your attention simply for the record inasmuch as we intend to publicize and use the name Miracula in relation to the heat pump.

F. H. ELDREDGE, Sales Promotion and Advertising Manager

### HIS MEN WILL GET COPIES AT THEIR HOME

Halle's  
(Authorized distributor for General Electric equipment in Central Colorado)  
119-121 North Nevada  
Colorado Springs, Col.

Editor:

"I am enclosing my renewal for AIR CONDITIONING & REFRIGERATION NEWS for two years, and I want to state again, as I have in the past, that anyone who tries to keep abreast of this industry without your magazine is overlooking the best bet that ever was made.

"As soon as a few of my men find permanent addresses I am going to add to this subscription additional copies to be sent to them at home, as I consider it required reading in this business.

"With my best wishes for your continued success, I am,

SIMON HALLE

### FOR SALE

15 3 H.P. Water Cooled Universal Units, less motors  
Model No. W300FS  
\$225.00 each

5 3 H.P. Water Cooled Universal Units, with motors  
Model No. W300FS  
\$300.00 each

These units can be purchased singly. Will ship SD/BL, with 20% deposit required with order.

**VICTORY**  
Metal Manufacturing Corp.  
1300 S. Front Street, Phila. 47, Pa.  
FULTON 9-3132

Specify  
**DAVISON PA 100**  
refrigeration grade  
**SILICA GEL**

in factory-charged dryers bearing this label or in bulk for refilling  
**PA 100 is your guarantee of all-around, superior performance**  
**SEE YOUR JOBBER**

**No matter what you make  
—you're not making it  
at a profit !**

**YOU** MAY HAVE the finest product of its kind. Your production set-up may be a miracle of efficiency. Perhaps you've even discovered how to cut your cost-per-unit below that of your closest competition. The fact remains —

You're still not *making* anything at a profit. Because actually, of course, there is no such thing.

Goods can only be sold at a profit. And selling them profitably requires

the same kind of mechanization that keeps your production costs down.

In the *manufacture of a sale*, for example, there are five basic operations —

1. Seeking out prospects
2. Arousing their interest
3. Creating a preference for your product
4. Making a specific proposal
5. Closing the order

Any good salesman can handle all five. But no salesman should have to

— not when the first three can be mechanized so economically through the use of advertising.

For good advertising, like the machine on your production line, is a multiplier of individual effort, enabling all of us to produce (and *earn*) far more than we could alone.

And when it goes to work in *business papers* — with their tremendous concentration of hand-picked prospects — advertising becomes the most efficient machine available for manufacturing sales at a profit!

### AIR CONDITIONING & REFRIGERATION NEWS

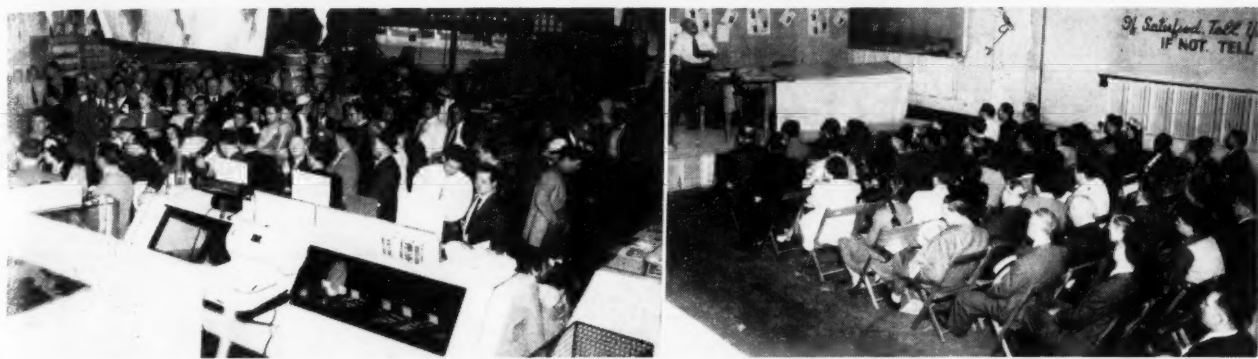
is a member of The Associated Business Papers, who have published an interesting folder entitled, "10 ways to measure advertising effectiveness." We'll be glad to send you a copy. And if you'd like reprints of this advertisement (or the entire series) to pass along to others in your organization, just say the word.



One of a series of messages to help you increase your understanding of business paper advertising, and its effect on your job.



## Detroit Commercial Distributor Acts As Host For Model Store & Merchandising Show



How an alert commercial refrigeration distributor can attract hundreds of customers and prospects to his place of business to view the latest in food merchandising equipment is illustrated by the photographs above, which show just some of the people who visited **Detroit Refrigerator Mfg. Co., Detroit Hussmann distributor**, to take in a "Model Store and Merchandising Show."

The event, which was held Sunday afternoon and evening and Monday

and Tuesday evening, was officially sponsored by the **Greater Detroit Food Congress**, a loose federation of several local grocer and food merchant associations.

**Lee Hayes**, head of **Detroit Refrigerator**, offered the use of his establishment for the show, and helped enlist the aid of various equipment and food distributors in putting it on.

Among the special events was a meat merchandising and meat cutting

clinic staged by **J. W. Witte**, vice president and sales manager of the **Biro Saw Co.**, who is shown in the photo at right at the start of the session.

A number of prizes were given away, but major interest of the food store operators was centered in the model store arrangement featuring the latest in open and closed refrigerated cases and the other market equipment that **Detroit Refrigerator** handles.

## Economical Use of Refrigerated Cases Helps Grocer Cut Operating Expenses

**MIAMI, Fla.**—Ferretting out seemingly insignificant "profit leaks" and rectifying them, has resulted in an over-all operating expense saving of 34% at **Gulman's Food Shop**, operated by **Morris Gulman** here.

"With profit spreads more limited, and customer purchases falling off due to the high cost of living, we have found it necessary to economize in all operating expense," **Gulman** said. "Prior to January, when we started the economy program, we considered that we were being reasonably economical already—but by 'going a little farther' we uncovered several surprising sources of savings."

A typical example cited by **Gulman** is "maximum use of self-service refrigeration." Like many other food stores, the **Gulman's Food Shop** found itself guilty of operating self-service refrigerated display cases only a third, quarter, or half full.

"This, we discovered, resulted in higher electrical operating expense," **Gulman** said, "because it actually requires more refrigeration to chill 28 lbs. of frozen foods in a box for 150 lbs., than it does for the 150 lbs."

"Therefore, we have reorganized our frozen foods delivery schedule so that each refrigerator is kept full for the largest number of hours per day."

As a direct result of this plan, made possible by asking our suppliers to reschedule their deliveries to match our sales turnover, we save 8% on the electrical bill."

Another step taken in the interest of economy by **Gulman** was to arrange for heavy canvas covers, which slide neatly down over self-service refrigerated cases after closing hours, and hold in cold so well that compressors which formerly would operate three hours out of the 12 the store is closed, now average only an hour and a half or so. Naturally, this, too, cuts down on electrical expense.

Packing boxes, lugs, fruit cases, etc., which were formerly discarded through lack of space, are now stacked into a neat pyramid near the checkstand in **Gulman's Food Shop**, and are sold to customers at 1 cent each for carrying out their purchases. The penny charge, while seemingly insignificant, is enough extra income per day to pay the cost of washing the store windows, for example, according to **Gulman**.

"Most customers are glad to get first-class condition cartons and boxes," he said, "and the 1-cent charge does not bring about resentment." Also, heavy use of sacks has been sharply cut down, saving another 2½% per month.

Figuring up "breakage losses" occurring when glass-packed goods were knocked from upper shelves of display gondolas, **Gulman** "surprised himself." "We found that even with careful handling, breakage of glass-packed goods was costing us anywhere from \$4 to \$12 a month," he indicated.

"To solve this, we have moved all glass-packed items to the lowest level of the gondolas, which makes it a little more difficult for customers to find them it is true, but this innovation has done away entirely with breakage."

Actual percentage saved here has not been figured as yet, but there is no doubt that eliminating breakage has a lot to do with the 34% over-all economies achieved.

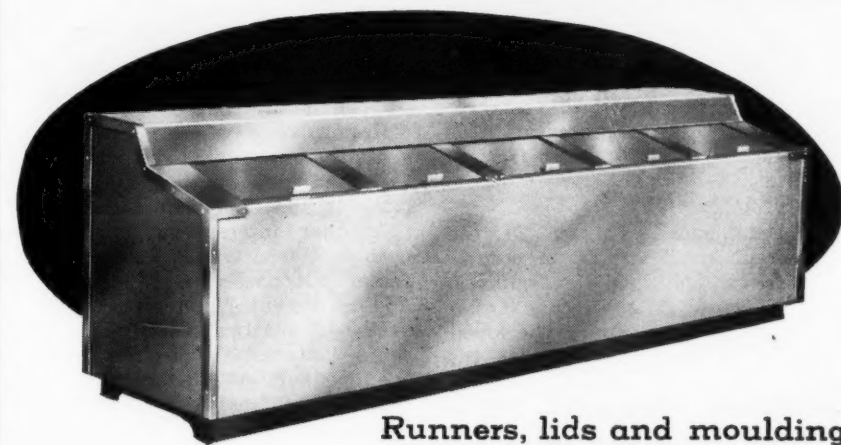
Pilferage—always the bane of the self-service store—has been cut sharply by moving the checkstands from a location immediately inside the front door to a point nearer the center of the market.

By elevating the floor, the cashier is given a "commanding position" which makes it easy to see the entire interior. Minor thefts, which occurred

regularly in the past, dropped tremendously under this "close supervision."

Scrap meats, which were formerly given away gratis for feeding dogs and cats, have proven to move just as rapidly when neatly packaged in 10 and 15-cent packages and kept in display cases, properly refrigerated for sale to pet owners, **Gulman** indicated.

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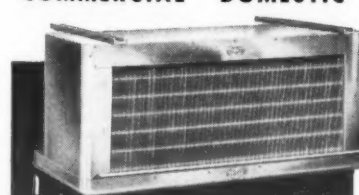
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# What Are the Factors In the Selection of an Insulation?

SWAMPSCOTT, Mass.—The complicated problem of selecting an insulation for a household refrigerator, and a broad outline of the choices afforded the designer and engineer, were discussed before the American Society of Refrigerating Engineers at its spring meeting here by Walter A. Kuenzli, cabinet engineer for Servel, Inc.

The paper, members said, was remarkable not for the presentation of new data but for its careful correlation into a neat "package" of existing information on the subject.

A fundamental criterion in the selection of insulation, is, of course, its *k* factor, or heat transmission factor, Kuenzli pointed out. Other considerations being equal, the lower the *k* factor the more desirable the insulation.

Aside from that, though, permanence of insulation is an important quality, as is its density, and moisture resistance.

## WHY COST IS A FACTOR

"Cost of insulation is very important," Kuenzli commented. "An 8-cu. ft. refrigerator, for example, could use 108 board feet of insulation, and with many insulations costing around 2 cents a bd. ft., the total cost can run high."

Some types of insulation cost much more than this, and so are not used, even though their physical properties might make them ideal for refrigerators, he added.

Outlining the types of insulation available, Kuenzli commented that corkboard was originally used in domestic refrigerators, but its cost was too high now. Other types included heavily asphalted mineral wool, and cellulose fibers in many forms.

Wood fiber in both the rigid and loose forms has possibilities also, the latter having the desirable feature that it can be shipped in a high density state and then changed into the desired low density state at the refrigerator factory.

"Very interesting also," Kuenzli said, were cotton fibers, which have a *k* factor of 2.4, low density, resilience, and low cost.

Kapok, once widely used, became virtually unavailable during the war and has not regained its former place in the industry.

Another interesting insulation is carbon black, which has a good *k* factor but possesses a high density and is dirty to handle, he said.

Use of plastics as insulation presents "interesting possibilities" too, the speaker said, particularly as a foam. Both polystyrene and urea formaldehyde foams are characterized by high water resistance and low density, with the polystyrene foam having a slight edge in some respects, he indicated.

Corrugated plastic film is a newcomer to the field of insulation, featuring low density, but its high price, Kuenzli implied, keeps it from being seriously considered at present.

Corrugated paper, properly prepared and installed, has been successfully used as insulation, even though it is not moisture resistant in itself.

## RECENT IMPROVEMENTS

Mineral and glass wools have been widely employed, and a recent important development in glass wool has been the reduction of fiber diameter. This has reduced the skin irritability, as well as the density, price, and *k* factor, according to Kuenzli.

Commenting on recent experiments with mineral and glass wools, Kuenzli remarked that he was "surprised at the high density at which the *k* factor was lowest."

Described as a "startling innovation" with a *k* factor of 0.14 to 0.15, which is less than that of still air, silica aerogel has attracted considerable interest, he said. Space-saving possibilities with such an insulation are very apparent, but it is high in price and has some other undesirable properties, pointed out Kuenzli.

Cellular glass is another new development in insulation, but here high cost combined with high density and a high *k* factor limits its possibilities in household refrigerators, although it may prove of tremendous interest in some other applications, the speaker said.

Exploded rock and reflection insulation were also commented upon, as was the possibility of employing a vacuum or filling air cells with a low conductivity gas.

The vacuum type insulation is prohibitive in cost, while the gas-filled method runs into such difficult problems as retaining the gas.

Combining a vacuum with silica aerogel has interesting possibilities, however, Kuenzli admitted.

# Refrigeration Problems

## And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

## How To Use a Refrigerant Table(6)

We now open the valve on the No. 1 cylinder as shown in Fig. 5. Vapor will now flow from the No. 1 to the No. 2 cylinder and completely fill it.

There will be no change in pressure, for the liquid will simply boil off enough vapor to replace that which went over into the No. 2 cylinder.

(Theoretically, the properties would change slightly; for the liquid, in boiling off this extra vapor, would temporarily be cooled a little, and this would reduce the pressure and other properties corresponding to the lower temperature. If, however, the room temperature remains at 80°, the temperature of the liquid would soon come back up to 80° and the pressure to 84 p.s.i.g., and the other properties to the values corresponding to 80°.)

We now have 80° saturated vapor in the upper part of cylinder No. 1, in the connecting line between the cylinders, and in all of cylinder No. 2. All of the properties will be exactly the same as before at 80°. We have merely added to the amount of space filled with saturated vapor, just as if we had simply increased the size of the cylinder.

## VAPOR WITHOUT LIQUID PRESENT

We can now close both valves and remove the connection line so that the cylinders are separate. As long as we keep the temperature at 80° or below, we maintain saturation conditions in both cylinders, for separating No. 2 from No. 1 makes no change in the condition of the vapor in No. 2 as long as we keep it at 80°.

If we change the temperature of the No. 1 cylinder, we still keep saturation conditions as long as liquid is present, just as shown in Figs. 1, 2, and 3.

Table 5 shows some of the saturation properties of "Freon-12" as prepared by Kinetic Chemicals, Inc. Complete tables and charts may be obtained from Kinetic or found in various reference books.

But what happens to the vapor in cylinder No. 2 that was separated from its liquid at 80°? As long as it is kept at 80°, it has the pressure, volume, density, heat content, and entropy shown for 80° saturation vapor as shown in Tables 2 and 5.

Suppose that we place it in a 60° room or the temperature around it

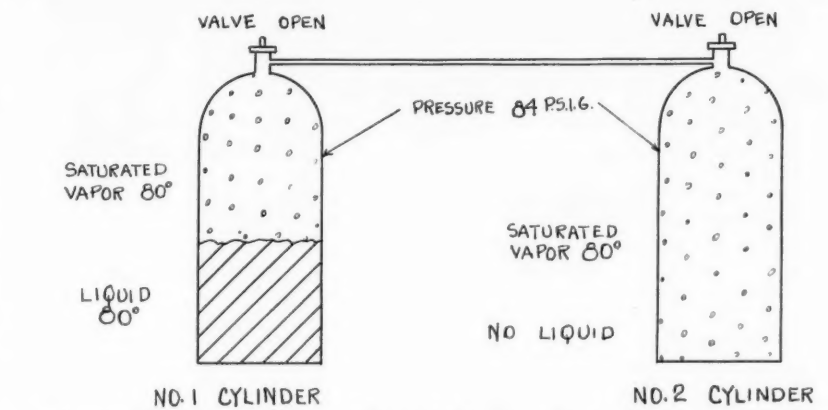


Fig 5—With valve on No. 1 cylinder opened, No. 2 cylinder is completely filled with saturated vapor.

changes to 60°. It will behave just as any other saturated vapor; just as was shown in Fig. 2. Some of the vapor will condense back to a liquid which will collect in the bottom of the cylinder, as shown in Fig. 7.

Its pressure will drop to 57.7 p.s.i.g.

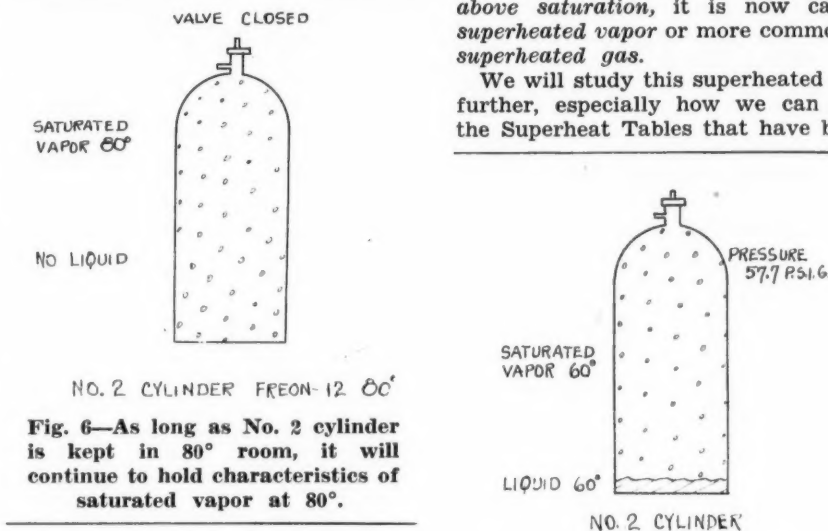


Fig 6—As long as No. 2 cylinder is kept in 80° room, it will continue to hold characteristics of saturated vapor at 80°.

and its other properties will be those for 60° saturation as shown in Tables 3 and 5.

If, instead of cooling it to 60°, we warm it to 100°, there is no liquid after 80°, so the pressure does not go up to 117 p.s.i.g. as was true in Fig. 3. That is, it cannot follow saturation conditions and the values shown in Fig. 5, above 80°.

## SUPERHEATED VAPOR

But we have added heat to it to raise its temperature to 100°, so it has more heat in it than the saturated vapor at 80°. Since it is heated above saturation, it is now called superheated vapor or more commonly superheated gas.

We will study this superheated gas further, especially how we can use the Superheat Tables that have been

Fig. 7—If placed in a 60° F. temperature, some of the vapor will condense back to a liquid.

prepared and are available and which show the properties of superheated gas.

(To Be Continued)

TABLE 5—SATURATED "FREON-12"

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Temp.	Pressure	Gauge	Volume	Density	Heat Content	Latent Heat	Entropy	Heat Content	Latent Heat	Entropy	Heat Content	
°F.	Abs. lb/in <sup>2</sup>	lb/in <sup>2</sup>	Liquid ft <sup>3</sup> /lb	Vapor ft <sup>3</sup> /lb	Liquid lb/ft <sup>3</sup>	Vapor lb/ft <sup>3</sup>	Liquid Btu/lb	Vapor Btu/lb	Heat Btu/lb	Latent Btu/lb	Entropy Btu/lb·°F	Vapor Btu/lb·°F
-100	1.43	*27.01	0.00998	22.20	100.20	0.0450	from -40°	from -40°				
-80	2.88	*24.05	0.01016	11.57	98.39	0.0864	-12.64	66.40	79.04	-0.0325	0.1873	
-60	5.36	*19.00	0.01036	6.52	96.51	0.1535	- 8.40	68.77	77.17	-0.0210	0.1823	
-40	9.32	*10.96	0.01057	3.91	94.58	0.2557	- 4.20	71.13	75.33	-0.0102	0.1783	
							0.00	73.50	73.50	0.00000	0.1752	
0	23.87	9.17	0.110	1.637	90.52	0.6109	8.25	78.21	69.96	0.1869	0.1701	
2	24.89	10.19	0.110	1.574	90.31	0.6352	8.67	78.44	69.77	0.1961	0.1705	
4	25.96	11.26	0.111	1.514	90.11	0.6606	9.10	78.67	69.57	0.2052	0.1709	
6	26.51	11.81	0.111	1.485	90.00	0.6735	9.32	78.79	69.47	0.2097	0.1712	
8	27.05	12.35	0.111	1.457	89.88	0.6864	9.53	78.90	69.37	0.2143	0.1715	
10	28.18	13.48	0.111	1.403	89.68	0.7129	9.96	79.13	69.17	0.2235	0.1730	
12	29.35	14.65	0.112	1.351	89.45	0.7402	10.39	79.36	68.97	0.2328	0.1718	
14	30.57	15.86	0.112	1.301	89.19	0.7681	10.82	79.59	68.77	0.2421	0.1706	
16	31.84	17.11	0.112	1.253	88.91	0.7966	11.25	79.82	68.57	0.2514	0.1694	
18	33.16	18.40	0.112	1.207	88.61	0.8257	11.68	80.05	68.37	0.2607	0.1682	
20	34.53	19.73	0.112	1.163	88.30	0.8554	12.11	80.28	68.17	0.2700	0.1670	
22	35.95	21.10	0.112	1.121	87.98	0.8857	12.54	80.51	67.97	0.2793	0.1658	
24	37.42	22.51	0.112	1.080	87.65	0.9166	12.97	80.74	67.77	0.2886	0.1646	
26	38.94	23.96	0.112	1.040	87.31	0.9480	13.40	80.97	67.57	0.2979	0.1634	
28	40.51	25.45	0.112	1.001	86.96	0.9800	13.83	81.20	67.37	0.3072	0.1622	
30	42.13	26.98	0.112	0.963	86.60	1.0125	14.26	81.43	67.17	0.3165	0.1610	
32	43.80	28.55	0.112	0.926	86.23	1.0456	14.69	81.66	66.97	0.3258	0.1598	
34	45.52	30.16	0.112	0.890	85.85	1.0792	15.12	81.89	66.77	0.3351	0.1586	
36	47.29	31.81	0.112	0.855	85.46	1.1133	15.55	82.12	66.57	0.3444	0.1574	
38	49.11	33.50	0.112	0.821	85.06	1.1479	15.98	82.35	66.37	0.3537	0.1562	
40	50.98	35.23	0.112	0.787	84.65	1.1830	16.41	82.58	66.17	0.3630	0.1550	
42	52.90	37.00	0.112	0.754	84.23	1.2186	16.84	82.81	65.97	0.3723	0.1538	
44	54.87	38.81	0.112	0.722	83.80	1.2547	17.27	83.04	65.77	0.3816	0.1526	
46	56.89	40.66	0.112	0.690	83.36	1.2913	17.70	83.27	65.57	0.3909	0.1514	
48	58.96	42.55	0.112	0.659	82.91	1.3284	18.13	83.50	65.37	0.4002	0.1502	
50	61.08	44.48	0.112	0.629	82.45	1.3660	18.56	83.73	65.17	0.4095	0.1490	
52	63.25	46.45	0.112	0.600	81.98	1.4041	18.99	83.96	64.97	0.4188	0.1478	
54	65.47	48.46	0.112	0.571	81.50	1.4427	19.42	84.19	64.77	0.4281	0.1466	
56	67.74	50.51	0.112	0.543	81.01	1.4818	19.85	84.42	64.57	0.4374	0.1454	
58	69.96	52.60	0.112	0.516	80.51	1.5214	20.28	84.65	64.37	0.4467	0.1442	
60	72.23	54.73	0.112	0.490	80.00	1.5615	20.71	84.88	64.17	0.4560	0.1430	
62	74.55	56.90	0.112	0.464	79.48	1.6021	21.14	85.11	63.97	0.4653	0.1418	
64	76.92	59.11	0.112	0.439	78.95	1.6432	21.57	85.34	63.77	0.4746	0.1406	
66	79.34	61.36	0.112	0.414	78.41	1.6848	22.00	85.57	63.57	0.4839	0.1394	
68	81.81	63.65	0.112	0.390	77.86	1.7269	22.43	85.80	63.37	0.4932	0.1382	
70	84.33	65.98	0.112	0.366	77.30	1.7695	22.86	86.03	63.17	0.5025	0.1370	
72	86.90	68.35	0.112	0.343	76.73	1.8126	23.29	86.26	62.97	0.5118	0.1358	
74	89.52	70.76	0.112	0.321	76.15	1.8562	23.72	86.49	62.77	0.5211	0.1346	
76	92.19	73.21	0.112	0.299	75.56	1.9003	24.15	86.72	62.57	0.5304	0.1334	
78	94.91	75.70	0.112	0.278	74.96	1.9449	24.58	86.95	62.37	0.5397	0.1322	
80	97.68	78.23	0.112	0.258	74.35	1.9900	25.01	87.18	62.17	0.5490	0.1310	
82	100.50	80.80	0.112	0.238	73.73	2.0356	25.44	87.41	61.97	0.5583	0.1298	
84	103.37	83.41	0.112	0.219	73.10	2.0817	25.87	87.64	61.77	0.5676	0.1286	
86	106.29	86.06	0.112	0.200	72.46	2.1283	26.30	87.87	61.57	0.5769	0.1274	
88	109.26	88.75	0.112	0.182	71.81	2.1754	26.73	88.10	61.37	0.5862	0.1262	
90	112.28	91.48	0.112	0.165	71.15	2.2230	27.16	88.33	61.17	0.5955	0.1250	
92	115.35	94.25	0.112	0.148	70.48	2.2711	27.59	88.56	60.97	0.6048	0.1238	
94	118.47	97.06	0.112	0.132	69.80	2.3197	28.02	88.79	60.77	0.6141	0.1226	
96	121.64	99.91	0.112	0.117	69.11	2.3688	28.45	89.02	60.57	0.6234	0.1214	
98	124.86	102.80	0.112	0.102	68.41	2.4184	28.88	89.25	60.37	0.6327	0.1202	
100	128.13	105.73	0.112	0.088	67.70	2.4685	29.31	89.48	60.17	0.6420	0.1190	
102	131.45	108.70	0.112	0.074	66.99	2.5191	29.74	89.71	59.97	0.6513	0.1178	
104	134.82	111.71	0.112	0.061	66.27	2.5702	30.17	89.94	59.77	0.6606	0.1166	
106	138.24	114.76	0.112	0.048	65.54	2.6218	30.60	90.17	59.57	0.6699	0.1154	
108	141.71	117.85	0.112	0.036	64.80	2.6739	31.03	90.40	59.37	0.6792	0.1142	
110	145.23	120.98	0.112	0.024	64.05	2.7265	31.46	90.63	59.17	0.6885	0.1130	
112	148.80	124.15	0.112	0.013	63.29	2.7796	31.89	90.86	58.97	0.6978	0.1118	
114	152.42	127.36	0.112	0.002	62.52	2.8332	32.32	91.09	58.77	0.7071	0.1106	
116	156.09	130.61	0.112	0.000	61.74	2.8873	32.75	91.32	58.57	0.7164	0.1094	
118	159.81	133.90	0.112	0.000	60.95	2.9419	33.18	91.55	58.37	0.7257	0.1082	
120	163.58	137.23	0.112	0.000	60.15	2.9970	33.61	91.78	58.17	0.7350	0.1070	



## Firms Showing at Summer Marts

## Merchandise Mart American Furniture Mart

<b>A</b>	
Aluminum Specialty Co.	1170
American Central Div. AVCO	1476
American Thermos App. Co.	14-101
American Wall Tie Co.	1235
Apex Rotarex Corp.	1472
Artkraft Mfg. Corp.	1454
Associated Projects Co.	1433A

<b>B</b>	
Bar Brook Mfg. Co.	1488
Bard Mfg. Co.	1157
Bennett Organization, The	15-112
Berges, T. W.	1467
Bersted Mfg. Co.	1481
Bloch, Alex. W. & Co.	1481
Boland Mfg. Co.	1197
Bradford, C. L. & Assoc.	1486
Buxbaum Co., The	11-112

<b>C</b>	
Carrier Corp.	1181
Casco Products Co.	1175
Chambers, Fred E.	1235
Clocks, Inc.	14-101
Coldair Corp.	1468
Continental Merchandise Corp.	1542
Control Mfg. Co.	1482
Cooler Corp., The	11-107

<b>D</b>	
Deepfreeze Div. Motor Prod.	1447
Detroit Mfg. Supp. Co.	1492
Dexter Co., The	14-103
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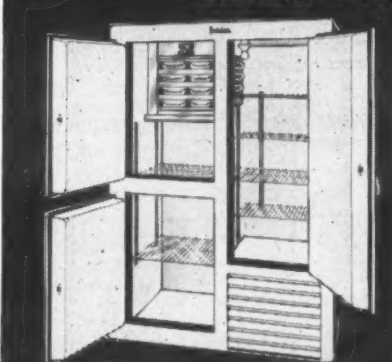
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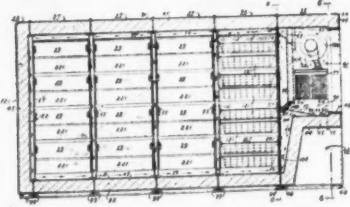
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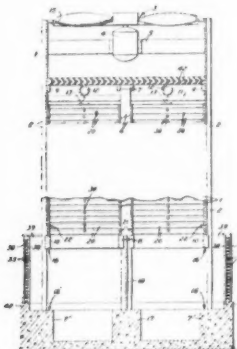
## Week of March 9 (Continued)

2,437,451. **LOCKER REFRIGERATING SYSTEM.** William McKinley Baird, Chicago, Ill. Application April 27, 1944. Serial No. 532,377. 10 Claims. (62-102.)



1. A refrigerating system comprising a cabinet, a plurality of tiers of imperforate drawers positioned within said cabinet, each drawer adapted to be slidably withdrawn from and returned into said cabinet from the exterior thereof, each of said tiers of drawers spaced from the ends of the cabinet and the adjacent tier at their sides and backs to provide vertical passageways, each drawer having a front panel, and a container portion spacedly attached thereto to provide a vertical passageway in front of the container portion, the top drawers of each tier spaced from the top of said cabinet to provide a horizontal top passageway, the bottom drawers of each tier spaced from the bottom of said cabinet to provide a horizontal bottom passageway, and a primary refrigerant section within said cabinet for cooling air for use as a secondary refrigerant and having means for forcing the secondary refrigerant into said top horizontal passageway, down through said vertical passageways, and thence into said bottom horizontal passageway, said cabinet having an exit passageway leading from said bottom horizontal passageway back to said primary refrigerant section.

2,437,484. **COOLING TOWER.** Edward W. Simons, San Francisco, Calif., assignor to one-half to George W. Null, San Francisco, Calif. Application Jan. 22, 1945. Serial No. 573,899. 9 Claims. (Cl. 261-109.)

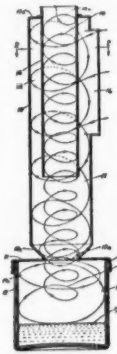


1. An induced draft cooling tower having imperforate side walls enclosing packing and having means for causing upward movement of air through said packing, a pair of spaced opposed laterally directed air inlets at the bottom of said tower for admitting said air into the lower end of said tower, a grid extending across each of said inlets, each grid comprising a substantially vertical row of vertically spaced horizontally extending strips each disposed in a horizontal plane and of airfoil cross-sectional contour with the blunt end of each such sectional contour facing outwardly relative to the inlet across which the strip extends, the lower surface of said airfoil contoured strips being arranged at an angle relative to a horizontal plane and sloping downwardly in the direction of the trailing edge thereof.

2,437,592. **DUST SEPARATOR AND FILTER.** Richard E. Brown, South Euclid, Ohio, assignor to Air-Maze Corp., Cleveland, Ohio, a corporation of Delaware. Application Jan. 8, 1945. Serial No. 571,767. 2 Claims. (Cl. 183-21.)

1. Means for separating dust from a stream of gas comprising a cylindrical tube open at the bottom, a second cylindrical tube extending within and downwardly from the top of said first tube to provide an annular inlet chamber, there being a space in said first tube beneath the lower end of said second tube provid-

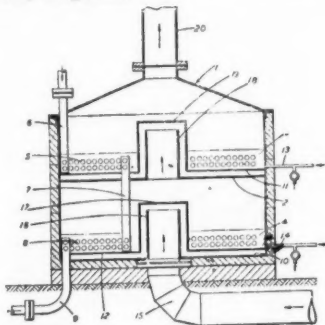
ing a vortex chamber there, there being a gas inlet opening leading into said annular chamber, said second tube having an open bottom and top whereby a gas outlet is provided at the top thereof, and a liquid-containing reservoir in closed communication with the open bottom of said first tube, whereby the gas stream is given a



whirling motion in said annular and vortex chambers causing liquid in said reservoir to be mixed with said gas and thrown against the walls of said reservoir and said vortex chamber to increase the dust separating action of said means.

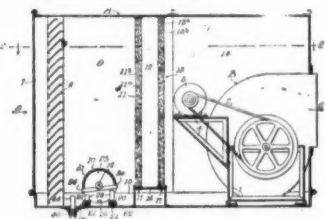
## Week of March 16

2,437,851. **COOLING OF FLUIDS.** Robert Cowell Godfrey, London, England, assignor to The British Oxygen Co., Ltd., London, England.



4. Apparatus for cooling a fluid by heat interchange with a gaseous coolant, comprising a plurality of containers each adapted to contain a mass of liquid, a tubular element in each said container located below liquid level, said tubular elements being serially inter-connected for conveying the fluid through the apparatus and an inlet to each said container for a gaseous coolant arranged below the tubular element, the arrangement being such that the gaseous coolant traverses the liquid in each container in succession, the direction of flow of the gaseous coolant with respect to the successive masses of liquid being in a direction counter to that of the fluid with respect to the successive masses of liquid.

2,437,936. **AIR CONDITIONING APPARATUS.** Thomas W. Carraway, Dallas, Tex. Application Nov. 30, 1944.



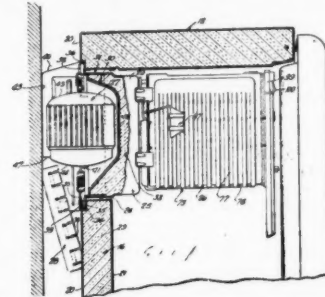
1. In air conditioning apparatus, a duct; equipment for moving air through said duct; and means for creating in said duct a diffused volume of liquid, said means comprising a disc having a concentric groove in at least one of its faces, means providing a supply of liquid, means mounting said disc to rotate with a portion thereof including said groove running through said liquid, and means for rotating said disc, said groove having an outer annular wall substantially constituting a cylindrical surface whereby liquid picked up in said groove from said supply will gradually and progressively work its way laterally to the grooved face of the disc thus retarding the discharging of part of the groove-held liquid from the disc and causing the character of the diffused liquid to vary progressively from a forceful spray of relatively coarse separated particles in one part of said duct to finely atomized liquid constituting a fog or mist in another part of said duct.

## Week of March 23

2,438,114. **REFRIGERATOR CONSTRUCTION.** James H. Kennedy, Evansville, Ind., assignor to Seeger Refrigerator Co., a corporation of Minnesota. Application Feb. 25, 1946. Serial No. 650,804. 9 Claims. (Cl. 62-116.)

1. A removable refrigerator unit comprising an insulating plug having an inner metallic shell to be located inside the cabinet and an outer metallic shell, the said shells being joined by breaker strips at their edges and the outer shell being recessed to receive and house a portion of a motor compressor unit, the space between said shells being filled with suitable heat insulation, forming a plug adapted to close an aperture in the rear of a refrigerator cabinet, said plug sup-

porting an evaporator on its inner shell and said plug supporting a motor compressor unit in the recess of its outer



shell, said motor compressor unit having an external cylindrical surface, a chimney

member open at its upper end and lower end and enclosing the projecting part of said motor compressor unit to form an air circulation chimney about the motor compressor unit, a condenser for said unit located to extend across the lower opening of said chimney whereby the air heated by said condenser will pass up said chimney and induce convection air currents past said motor compressor unit to cool the latter, and a cooling unit for said motor compressor unit, comprising a cylindrical body complementary in shape to the exterior cylindrical surface of the motor compressor, said cylindrical body having a multiplicity of laterally extending fins projecting from each of its opposite sides, the fins being located parallel to each other and to said chimney member.

(To Be Continued)

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MANUFACTURERS SALES agents wanted to represent reliable manufacturer of high quality Freezers and Milk Coolers. Applicants must have a proven record in the sale of commercial refrigeration. State age, experience and location preference. BOX 2818 Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER on household units. Must have experience with capillary restrictors, heat exchangers, evaporators and condensers. We have a good opportunity for an aggressive man. Location, Michigan. Salary open. BOX 2831 Air Conditioning & Refrigeration News.

SALESMEN EXPERIENCED selling to dealers. We manufacture an attractive line of efficient frozen food and dairy products display cabinets priced within the purchasing range of the small grocer. We want a man in each state to appoint dealers. Experience from states now covered indicates a good income is assured. Liberal commission and bonus. Write complete educational and employment records. Include photograph. BOX 2841 Air Conditioning & Refrigeration News.

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SECOND HAND refrigerators, all makes and models in operating condition for immediate delivery. HANTOBER & CO., INC., 200 East Church Lane, Philadelphia 44, Pa.

AMANA WALK-IN 123 cu. ft. 8'x4'x6'10" high freezer-coolers. Self contained 1/4 HP Universal compressor, blower coil, 4-Dole freezer plates, factory assembled, tested & charged with "F-12". All new crated, offered subject to prior sale. Sacrifice \$550.00 f.o.b. MASON, BROWN & COLVILLE, INC., 1529 Walnut Street, Philadelphia 2, Pa.

5 HP MILLS & Par condensing units \$395. 5 HP Typhoon weathermakers \$395. 1/4 & 1 HP Amco weathermakers \$150. 15 HP Larkin evaporative condenser \$795. The following less motors: 50 HP Schnacke \$995. 1/4 HP Universal \$49. 3/4 HP Copeland \$39. We sell "as is" used refrigerators with sealed & open units. PILGRIM REFRIGERATION CO., 48-20 43rd Avenue, L. I. City 4, N. Y.

PEERLESS FREEZER plates: 18 x 72—\$11.00 each, 12 x 72—\$8.50 each, 6 x 84—\$6.00 each, 9 x 84—\$7.00 each. 3 HP. water cooled Curtis refrigerating unit complete with motor—\$375.00. RICHMOND REFRIGERATION SERVICE, INC., Box 56, Staten Island 10, N.Y.C.

SEALED CROSLLEY terminals. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools needed. Stops leaky terminals on "F-12" units. Part # 1020 short model—for short Croslley terminals ("F-12" compressors with 4 mounting legs). Part #1020 long model—for long Croslley terminals ("F-12" compressors with 3 mounting legs). \$5.25 set of three. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

REBUILD YOUR own sealed units. Send us your burnt and stuck up heads and they will be immediately replaced from our stock. Send for our complete price list. TECHNICAL REFRIGERATION SPECIALISTS, 362 East 180th Street, Bronx 57, New York.

NEW SODA fountains: "Walrus" 54 in. Bob-tails complete carbonator and refrigeration unit \$799.00. SAM TULLER REFRIGERATION CONTRACTOR, Beulah, Michigan.

IMMEDIATE DELIVERY from stock. FOB New York, Delco motors: 1/4 CS 16.28; 1/2 CS 18.96; 3/4 CS 18.48; 1/2 CS 24.16; 1/2 RI 34.56; 3/4 RI 44.24; 1 RI 61.60; 1 1/2 RI 79.20. All industrial, other motors, on hand. WHOLESALE DISTRIBUTORS, INC., 150-19 Liberty Ave., Jamaica 4, N. Y. Jamaica 6-1733.

CONDENSING UNIT—2 stage, 10 ton capacity, to 50° below Centigrade. New. BOX 2844 Air Conditioning & Refrigeration News.

## BUSINESS OPPORTUNITIES

AUDEL'S REFRIGERATION & Air Conditioning Guide. A useful manual, 1280 pages. Fully illustrated, covering the theory, construction, servicing, operation and repair of household, commercial and industrial refrigeration & air conditioning. 1001 facts. Easy to understand. Highly endorsed by service men and mechanics. Price \$4 postpaid. Money refunded if not pleased. AUDEL PUBLISHERS, 49 West 23 St., New York 10, N. Y.

FOR SALE: Air conditioning manufacturing corporation with complete facilities, organization and skilled personnel producing 7 1/2 to 50 ton air conditioning packaged units and evaporative condensers. Advantageously located in large Southern City. Unusual opportunity offered at \$40,000 with terms. For detailed information contact FIDELITY BUSINESS BROKERS, INC., Maxwell House, Nashville, Tennessee.

THE MOST modern, long established, successful store equipment business. Fully stocked. With most modern buildings on Main St. Everything that is used in food store & other equipment. Will stand any investigation. ORIOLE STORE EQUIPMENT CO., Salisbury, Md.

COMMERCIAL REFRIGERATION business—handling nationally known merchandise—three trucks on the road, and doing approximately \$35,000 a year business.

Inventory and building approximately \$25,000. Reason for selling—retiring from business. For further information write P. O. BOX 484, Stroudsburg, Penna.

DO YOU want to sell your refrigeration business? We want to buy: Long established commercial, domestic and air conditioning sales and service business, including inventory, stock of parts and supplies. Year-around business and good location essential, preferably West Coast. Give full particulars in answering. BOX 2761 Air Conditioning & Refrigeration News.

FOR SALE: Established commercial and industrial Refrigeration and Air Conditioning Contracting Business. In growing South Central state. Unusual opportunity for sales engineer who wants own business. Distributor franchise covering complete line. A-1 location, building lease. Reason for selling: Other business requires full time. BOX 2825 Air Conditioning & Refrigeration News.

FOR SALE: Good going refrigeration service business. Overhead low, shop fully equipped and well stocked also excellent service truck. Good California location with plenty of maintenance and sales available. Real opportunity for a good volume business for a small investment. BOX 2842 Air Conditioning & Refrigeration News.

FOR SALE: Commercial refrigeration business, located in central Wisconsin. Population 30,000. Doing better than \$132,000.00 yearly. Good going business—employing 9 people. Franchised with 5 leading manufacturers. Available for \$40,000.00 cash. This includes inventory, equipment, 3 trucks and one company car—all late models. Write BOX 2843 Air Conditioning & Refrigeration News.

WELL ESTABLISHED and fast growing commercial refrigeration business located in Central New York State. A wonderful opportunity for a younger man to step into a going business. First class mechanic that knows the territory. Approx. \$10,000.00 to handle. Details to those qualified. BOX 2845 Air Conditioning & Refrigeration News.

## Foreign Distribution Available

Specialists in electric refrigeration with 22 years experience, request direct agencies for domestic and commercial refrigerators, ice-cream freezers and storage cabinets. Also commercial low power condensing units.

Write: Etablissements

C. FRANCO

86 Rue Jourdan,  
Brussels, Belgium.

**FOR SALE**  
**50 MACHINES**  
**2 TON "TEMPRITE"**  
**REFRIGERATION MACHINES**  
NEW—in original crate  
purchased from Government  
**\$250.00 each**  
Send for Photograph & Description  
**MARKS BROTHERS COMPANY**  
151 Hallet Street, Boston 24, Mass.  
Tel. TAibot 5-3700

## Salesmen Wanted

Old, established refrigerator manufacturer offers salesmen unusual opportunity to sell self-service frozen food cabinets to dealers. Good territories still open. Commissions on sliding scale up to 10%.

**PALEY MANUFACTURING CORP.**  
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SLocum 6-3040

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## Supply Wholesaler's New Quarters Offers Many Conveniences for Its Customers



(Left) The 63-foot specially lighted counter in the new J. M. Oberc refrigeration parts and supplies wholesaling headquarters in Detroit assures prompt and convenient service for customers. Floor area to right is used for display of unitary equipment. (Right) Al Mattes, sales engineer for the firm, shows how a fork truck is used to stack crated items in the high-ceilinged warehouse area, as Phil Padgett of the company looks on.



Head of the parts and supplies wholesaling company J. M. Oberc in one of the offices lining the front of the building. With him are his wife and daughters (left to right—Norma, Mrs. Oberc, and Mary Jo) who were on hand at the open house June 19 celebrating the formal opening of the new building. (Right) Ben Poznaniak, behind the counter, is ready to wrap up some supplies for Reg and Sid Harp, Campbell Construction Co., Detroit, selected from a "terraced" display stand which is used to display small items on the counter.



(Left) Mike Maksym, head of M & S Refrigeration Engineers, Detroit, makes use of the "customer's room" fitted with telephone and desk, where customers can make phone calls or conduct business in private. Lounging outside on a comfortable settee next to a water cooler are A. B. Brady of Dole Refrigerating Co., and Hugh Smart of Refrigeration Appliances, Inc. (Right) Loading dock, which accommodates trucks of customers, and also will handle the largest truck-trailers bringing in supplies.

### M-H Mexican Subsidiary Opens Branch Office In Monterrey

NEW YORK CITY—The Mexican subsidiary of Minneapolis-Honeywell Regulator Co. has opened a branch office at Monterrey, William H. Westphal, manager of the company's international division, announced.

Honeywell-Brown S. A., Mexico, D. F., was incorporated a year ago with headquarters in Mexico City. The Monterrey office is the first branch to be opened by the subsidiary.

Francisco B. Rocha has been placed in charge of the branch. Territory covered includes seven states.

### Chattanooga Furniture Store Installs Air Cooling Units

CHATTANOOGA, Tenn.—Southern Blow Pipe & Roofing Co., this city, used a full-page advertisement in the *Chattanooga Times* to announce the installation of York air conditioning equipment in the Hodge Furniture Co.'s modern new store at Brainerd and Germantown roads.

The new store, which held its formal opening June 17, represents an investment of approximately \$100,000.

### Zabriskie Handles Advertising, Sales for G-E Jersey Branch

BLOOMFIELD, N. J.—J. C. Saur, manager of the North Jersey Branch of General Electric Appliances, Inc., has announced the appointment of Russell J. Zabriskie as advertising and sales promotion manager.

Since early in 1945, Zabriskie has represented the national advertising department of the *Newark News* in the appliance field and has built a broad acquaintance among manufacturers and distributors.

### Anniversary Booklet Covers 25 Years of Morrison Products

CLEVELAND—Marking 25 years of growth, Morrison Products, Inc. has issued a 20-page booklet that carries a description of its plant operations.

The firm, which manufactures blower wheels, metal stampings, and steel wheel guards, is headed by Hunter Morrison. Other officers are: Hunter Morrison, Jr., vice president in charge of production; Thompson Morrison, vice president in charge of sales; C. A. Wright, treasurer; F. G. Marbach, design and development engineer, and Al Galaba, chief engineer of the Blower Division.

DETROIT—The new home of J. M. Oberc, Inc., pioneer wholesaler of refrigeration parts and supplies here, has been designed primarily to render service in the fastest and most convenient fashion for the firm's customers, the majority of whom come to the wholesaler's place to pick up supplies.

The newly constructed building, at 55 Oakman Boulevard, has the following special features, representing the planning of Joe Oberc, head of the company, to give customers the maximum of service:

A 63-foot long sales counter, assuring each customer plenty of room and fast service.

Stockroom immediately behind the sales counter, with 84-inch high open steel shelving, all properly marked and cataloged. This speeds up servicing of counter customers.

Loading dock with depressed driveway, which will accommodate two trucks at a time.

"Customer's room" near the main door end of the sales counter, a small, enclosed room with telephone and writing table for exclusive use of customers.

A display floor measuring 73x22 feet, for the display of various types of unitary equipment.

An auditorium, 22x50 feet, with chairs, suitable for meetings of such groups or organizations among customers who might want to hold meetings, or for such meetings as the Oberc organization itself might want to sponsor. Adjoining the auditorium is a completely equipped kitchen, so that food may be served at the meetings, if desired.

The new Oberc establishment is not in any way designed to be "self-serve" for the customers, but one development which Oberc has innovated is the use of on the counter of "terraced" stands made of sheet steel, on which small items can be merchandised. Customers will probably "serve themselves" from these stands.

Along the front of the building are offices for the Oberc staff. These are glassed in below eye level, and look out across the display floor to the counter. Thus the customers can see any and all of the Oberc personnel, and vice versa.

The parts and supplies wholesalers' business has been built by intimate contact with customers, and Oberc has arranged his offices so that the intimate contact will be encouraged.

Oberc's office is right next to the main door. Other offices include that of Ed Germain, secretary of the company; Al Mattes, sales engineer; the inventory control office; accounting office; stenographic and filing office; sales promotion office, housing the multilith machine and catalog producing equipment.

Another glassed in office at the end of the counter nearest the door houses the telephone operator and cashier.

There is 15,800 square feet of floor area in the Oberc establishment, about half of which is devoted to a warehouse area in the rear. The front part, containing the offices, display floor, and stockroom, are separated from the warehouse by a fire wall. There is a built-in fireproof vault for records in one of the offices.

A special incinerator was installed to burn rubbish, and the rubbish that can't be burned is placed in a special room off the warehouse from which rubbish collectors can get it.

## Air Conditioners Help Pharmacy Double Volume

OMAHA, Neb.—Two 2½-ton York packaged air conditioning units have helped to more than double sales volume in the remodeled Green's Rexall Pharmacy at 40th and Farnam streets, according to Larry Rice, proprietor.

The two units handle the air conditioning job very well in the 50x150 foot store, Rice pointed out. One unit has been located at the front end of the long soda fountain, while the second machine is situated at the rear end near the prescription department.

## New Air Conditioner Firm In Bristol, Tenn.

BRISTOL, Tenn.—A general sales, installation, maintenance, and service business will be offered by the Tennessee-Virginia York Co., which has just been organized here to act as distributor for refrigeration equipment in upper east Tennessee and southwest Virginia.

A full dealer organization will be set up by the new firm, reports J. P. Burns, one of its executive officers.

## Office Supplies and Coolers

KANSAS CITY, Mo.—Paul R. McCole, Inc., 1424 Walnut St., has been appointed a dealer for Carrier room air conditioners. The firm has specialized in the sale of high-grade office furniture and accessories.

## for SULFUR DIOXIDE and METHYL CHLORIDE

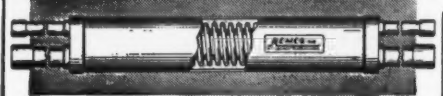
## See Your ANSUL WHOLESALER



These Ansul Refrigerants have a long record for DRYNESS, PURITY and DEPENDABILITY. You will like Ansul's friendly service.

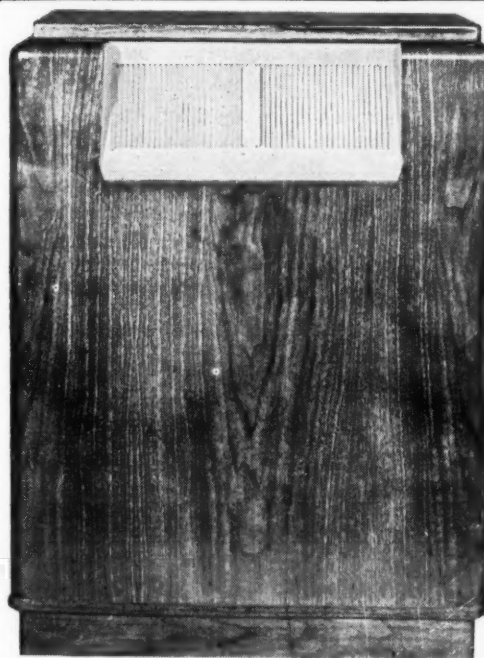
**ANSUL CHEMICAL COMPANY**  
REFRIGERATION DIVISION  
MARINETTE, WISCONSIN  
DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22," "FREON-113" AND "FREON-114"

## REMCO "Liquid-Fin" HEAT EXCHANGERS



LIQUID flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transfer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high.

ASK YOUR WHOLESALER... OR WRITE  
REMCO, INC., ZELIENOPLE, PA.



UNITS That Have The Whole Industry Talking!

Refrigerated AIR CONDITIONING that can be installed WITHOUT

## Specifications That Spell S-A-L-E-S!

- COMPACT. 27" high, 22" wide, 10" deep.
- CAPACITY 2 Rotary Blowers, 12,000 BTU per hour.
- REFRIGERATED. With Freon.
- FILTERS AND DEHUMIDIFIERS. Fiberglass filters.
- ENGINEERED. To cool 2,500 cu. ft. room under normal conditions.
- SMART. Walnut, blond mahogany or white finishes. Special finishes on quantity orders.

- MODERN CONTROLS. Equipped with Expansion Valve, Solenoid and Thermostat for TRIPLE control.

- MOVABILITY. Compressor-to-unit copper tubing is easy to install, easy to move. Apartments or hotels can offer CHOICE of air conditioning. Lessees can install and later move unit without losing equity.

## "Wrecking the Place"

INTERNATIONAL—the most modern air conditioning system on the market—has a lower initial cost and installs for 25% to 40% less! No expensive alterations of walls, ceilings or masonry... operates anywhere in the room. These are BIG selling points! As efficient as it is attractive (finished in walnut grain, blond mahogany or white porcelain), INTERNATIONAL cools and dehumidifies from any location in a home, office, hospital, tourist court, hotel. The compressor (extra) can be placed in attic, basement or closet, connects to the unit by an easily installed, inexpensive copper tube. Movable, fully automatic, triple thermostatic control. Increased compressor capacity makes large commercial sales easy. Order your stock NOW.

## DEALER FRANCHISES OPEN

This item is NEW! WRITE or WIRE for franchise territories, terms and quantity discounts.

Remember,

INTERNATIONAL fits ANYWHERE.

Stock INTERNATIONAL now... for greater sales and profits in Modern Air Conditioning.



INTERNATIONAL AIR CONDITIONING

Manufactured by  
INTERNATIONAL MFG. CO.  
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Cable Address  
"Intime"

## CHECK with Ranco FIRST

- ★ Specialists in Refrigeration
- ★ Dependability
- ★ Greater Customer Satisfaction
- ★ More Ranco Controls In Use
- ★ Less Stock To Carry
- ★ More Profit For You

**Ranco Inc.**  
COLUMBUS 1, OHIO

## Ranco... for Two Temperature Replacements

With more than 15,000,000 Ranco Refrigeration Controls in use, you can be sure that Ranco Replacement Controls provide satisfactory, dependable service that pleases customers. And with a complete line of Ranco Controls available at your Ranco wholesaler, you'll find it's easy to find the Ranco Control exactly suited to your replacement needs. Check with Ranco first.

Ranco Type 91-0 Commercial Two Temperature Control. For walk-in coolers, display cases, florist boxes and similar temperature range fixtures. The 91-0 assures uniform fixture temperatures and uniform high relative humidity, automatically changes differential to suit load of each running cycle.



World's Largest Manufacturers of REFRIGERATION CONTROLS



Over-Franchised Area--

(Concluded from Page 1, Column 4) manufacturers and distributors after the war "represented a very serious threat to our business."

"Although most distributors tried to keep a steady hand at the helm, practically all of them made the mistake of opening up too many new accounts," he declared. "Most of the prewar dealers are convinced that in this way their troubles began."

"Short supplies in major items soon aggravated this condition and today the threat is more dangerous than at any time in our history."

Retailers, McCormick emphasized, must have better protection in order to succeed in the business.

"We are not harping on the much-discussed subject of price cutting as a separate and distinct issue," he pointed out. "Every businessman will grant concessions under certain circumstances. We all agree on that issue."

"We are exercised about the 'chiseler' who snipes at the legitimate sales that are being promoted through the advertising and selling efforts of the dealers who are organized and who are carrying the burden of an organization."

"Much of the money that has been spent in training salesmen has benefited other lines of business because those trained men were so discouraged after they had devoted their efforts to working up sales only to lose them to parasites, that they found jobs in other fields."

"Most dealers just can't hold salesmen. But when dealers are doing a thriving business they can pay their bills, can advertise, can carry sufficient stocks, and can maintain a sales force."

Other speakers who addressed the meeting were Isadore Borstein, of Borstein Electric Co. and president of the Retail Electrical Merchants Association, and Mort Farr, Alex Wilf, and Raymond Rosen.

The association was formed about a month ago. Its membership is said to comprise a substantial group of radio, television, and appliance merchants in the Greater Philadelphia area.

Change In Distributors

SOUTH BEND, Ind. — Wyatt-Cornick, Inc., Richmond, Va., is announced as the new distributor in the Richmond territory for Bendix Home Appliances, Inc.

Laboratory Designed To Test Refrigeration and Air Conditioning Equipment Opens on West Coast

PALO ALTO, Calif.—A laboratory especially designed and equipped for testing air conditioning, heating, and refrigerating equipment has been opened here by the Washington Engineering Co.



L. Washington

According to Lawrence Washington, its founder, the new company was established to render consulting, design, and testing services to manufacturers and to individuals interested in the development of new products.

Built and equipped by Washington in 1945, the laboratory was, until recently, operated by him exclusively for Auto Coolers, Inc., of Cleveland. Auto Coolers designed and tested room air conditioners for Pacific Mfg. Corp., also of Cleveland. During the life of Auto Coolers' contract with Pacific, Washington directed the design and testing of several experimental conditioners and carried on an extensive program of tests, both of the original Pacific units and of competitive products.

Although the laboratory of the Washington Engineering Co. is equipped primarily to test window and floor-type room air conditioners, its facilities are equally suited to the testing of commercial cooling units, air and water-cooled condensing units, and such component parts as compressors, motors, evaporator and condenser coils, expansion valves, fans and blowers, etc.

The ASRE standard rating test of room conditioning units may be supplemented by simultaneous measurement of the "Freon" flow rate, refrigerating effect in the evaporator, and heat rejection in the condenser. It is thus possible to compute independent heat balances on the high and low sides, and to determine thereby whether the design of the unit is such as to utilize fully the inherent capacity of the refrigerating system.

Additional tests of room conditioners, such as the ACRMA maximum continuous operating conditions and high and low-voltage tests, and the

ACRMA condensate-disposal and insulation-efficiency tests, may be performed.

The ASRE codes are followed, according to Washington, in testing such equipment as condensing units, evaporative condensers, forced-circulation air coolers, etc.

Other phases of the laboratory's work are the testing of gas heating appliances, measurement of the relative fire hazards and heat losses of furnace vent pipes, and determination of the heat-transfer coefficients of insulating materials, building materials, and composite wall structures.

Since graduating from the Massachusetts Institute of Technology, Washington has specialized for 26 years in the thermal branches of mechanical engineering. His experience has included efficiency engineering in central steam-power stations; editorial work on technical magazines; the design and testing of heat-transfer apparatus; sales engineering; mechanical design on oil and mineral refining projects—including the Manhattan Project—and ten years of teaching, at Minnesota, Lehigh and Stanford universities. He has directed fundamental research projects in heat transmission and has published papers on that subject and on air conditioning and refrigeration.

Since it was first established, his laboratory has been staffed with graduate engineers chosen for their aptitudes in mechanical design and laboratory testing, he stated.

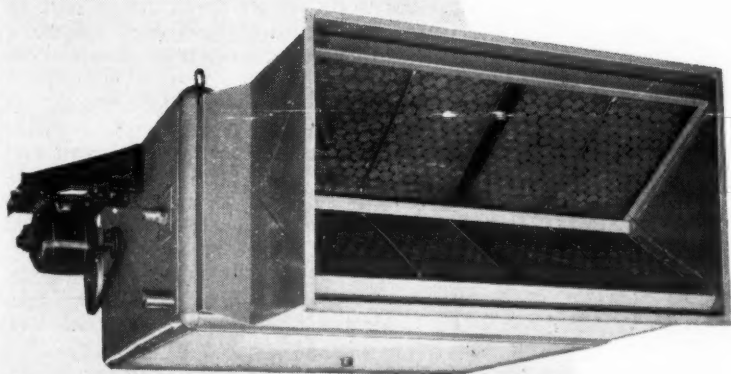
NEMA Freezer Sales for March and Quarter

MARCH Sizes	Domestic	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under ....	15,716	....	130	15,846
2. 5.0 to 6.9 cu. ft. ....	8,157	....	103	8,260
3. 7.0 to 8.9 cu. ft. ....	6,236	....	181	6,417
4. 9.0 to 10.9 cu. ft. ....	2,590	....	....	2,590
5. 11.0 to 12.9 cu. ft. ....	4,705	....	23	4,728
6. 13.0 to 16.9 cu. ft. ....	3,306	....	8	3,314
7. 17.0 to 20.9 cu. ft. ....	3,448	....	....	3,448
8. 21.0 to 29.9 cu. ft. ....	170	....	....	170
9. 30.0 to 39.9 cu. ft. ....	120	....	....	120
10. 40.0 to 49.9 cu. ft. ....	2	....	....	2
11. 50.0 to 59.9 cu. ft. ....	....	....	....	....
12. 60.0 cu. ft. and up ....	11	....	....	11
Total .....	44,461	....	445	44,906

FIRST THREE MONTHS Sizes	Domestic	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under ....	24,376	....	402	24,778
2. 5.0 to 6.9 cu. ft. ....	19,072	....	315	19,387
3. 7.0 to 8.9 cu. ft. ....	25,485	....	338	25,823
4. 9.0 to 10.9 cu. ft. ....	8,774	....	47	8,821
5. 11.0 to 12.9 cu. ft. ....	17,935	....	75	18,010
6. 13.0 to 16.9 cu. ft. ....	8,732	....	14	8,746
7. 17.0 to 20.9 cu. ft. ....	7,620	....	5	7,625
8. 21.0 to 29.9 cu. ft. ....	593	....	3	596
9. 30.0 to 39.9 cu. ft. ....	1,923	....	....	1,923
10. 40.0 to 49.9 cu. ft. ....	8	....	....	8
11. 50.0 to 59.9 cu. ft. ....	....	....	....	....
12. 60.0 cu. ft. and up ....	29	....	....	29
Total .....	114,547	....	1,199	115,746

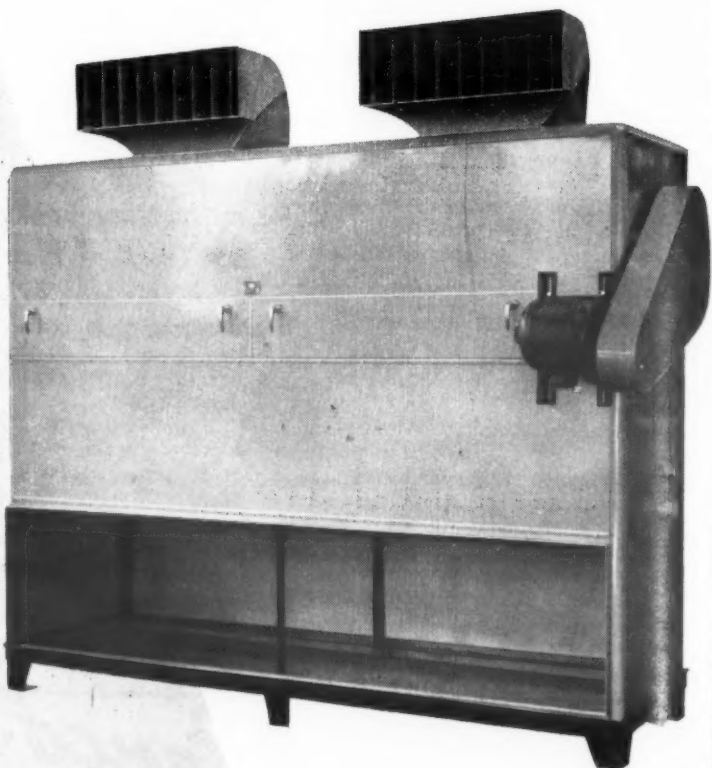
Participating companies: Ace Cabinet Corp.; August G. Barkow Mfg. Co.; Beatty Mfg. Co.; Ben-Hur Mfg. Co.; R. H. Bishop Co.; Brewer-Titchener Corp.; Carrier Corp.; Chapman Refrigerator Sales Co.; The Coolerator Co.; The Crossley Div., AVCO Mfg. Corp.; Deepfreeze Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; General Refrigerator Corp.; Gibson Refrigerator Co.; Hotpoint, Inc.; Ideal Cooler Co.; International Harvester Co.; Masterfreez Home Locker Manufacturing Co.; The Maytag Co.; Midwest Industries, Inc.; Nash-Kelvinator Corp.; Norge Div., Borg-Warner Corp.; Oregon Refrigerator Co.; Portable Elevator Co.; Quillan Brothers Ref. Co.; Refrigeration Corp. of America Div., NOMA Electric Corp.; Revco, Inc.; Sanitary Refrigerator Co.; Schaefer, Inc.; Seger Refrigerator Co.; Emil Steinhart & Sons, Inc.; Stoddard Mfg. Co.; Sub-Zero Freezer Co., Inc.; Whiting Corp. (In 3-1-48); Wilson Cabinet Co., Inc.

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MILLION

We're talking in units of products and people, of course... not dollars. But the dollars will do all right, too. Air conditioning pays off... particularly when you specify these high-capacity, high-efficiency units by BUSH, pioneers in the heat transfer field since 1907. Low speed motors for long, trouble-free service. Low velocity fans for quiet, efficient operation. Expertly engineered and built of top-quality materials to rigid specifications. Designed for easy installation and ready access.



Write DEPT. C3 for the new folder describing BUSH Air Conditioning Units with complete engineering data to help you plan and specify.



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NOW is The time to Cash in on the Big Room Air Conditioning Market...



SELL THE AMAZINGLY SUCCESSFUL

MITCHELL  
M-10  
Genuine ROOM  
AIR CONDITIONER

SEND FOR THIS BOOK on "How to Make Money Selling MITCHELL Room Air Conditioners"....



WRITE FOR YOUR FREE COPY TODAY

A Major Appliance that's Easy to Sell, Trouble-Free, and PACKED with PROFIT

It's easy to get into the profitable Room Air Conditioning business with the MITCHELL unit. Here's genuine 5-function Air Conditioning... cools, dehumidifies, filters, circulates, ventilates! Powerful 1 1/2-ton hermetically-sealed refrigeration mechanism delivers 5780 BTU per hour (certified by U.S. Testing Co.)—nothing in the field comes close to this performance! Sell the MITCHELL unit like any major appliance package. We provide you with everything you need to know for easy estimating and simple installation. Fits any window; plugs in like a radio. You can sell successfully with the barest minimum of technical knowledge. Start earning big profits with the MITCHELL Room Air Conditioner NOW. Write for the full selling details today!

Air Conditioning Division  
MITCHELL MANUFACTURING COMPANY  
2529 N. Clybourn Ave., Chicago 14, Ill.



Continuously Serving  
The Refrigeration Industry  
SINCE 1919

Representatives in 24 Principal Cities

- EVAPORATIVE CONDENSERS
- DRY-EX WATER CHILLERS
- FREON AND AMMONIA CONDENSERS
- SHELL AND COIL CONDENSERS
- PIPE COILS
- INDUSTRIAL UNIT COOLERS
- HEAT EXCHANGERS
- OIL SEPARATORS
- LIQUID RECEIVERS

ACME  
INDUSTRIES INC.  
Jackson, Mich.